THE CULTIVATOR.

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MANAGEMENT OF FARM-YARD MANURE.

THE question is often asked, whether manure should be applied in its fresh state, or be first allowed to decompose?

In considering the subject, it may be proper to observe that some kinds of crops, as wheat and other "English grains," might be injured by the application of manure in its unfermented state—the manure increasing the liability to blight or mildew; while Indian corn, on the other hand, and most root crops, are not injuriously affected by the rankness of fresh manure, and derive as much or more benefit from its being applied in that state, as in any other. The late Judge BUEL was much in favor of unfermented manure for the corn crop, and he advised that it should be spread broadcast, and plowed in. The soil of his farm was rather light and sandy. On compact soils, it is desirable to produce a mechanical effect by the application of manures, that is to render them more friable and open; and this object can be best effected by applying the manure in a fresh state, mixed with straw or fibrous vegetable matter. But excepting in cases where it is wished to change the texture of the soil, by rendering it more light, the bulky and strawy nature of fresh manure would be rather an impediment to cultivation, and has not, that we can discover, any special advantages.

It has been said that manure can never have a greater intrinsic value than at the time it is voided by animals; and we have heard this argued as a reason for applying it to the soil as speedily as possible. It is probably true that no new principle is added to manure in passing through the process of decomposition; and yet we think there is generally an advantage in *composting* manures, and allowing them to become considerably rotted before they are applied to the land. We will give our reasons for this position.

On almost all farms there are substances, which, if properly mixed with animal manure, would enhance its value to an amount much beyond the cost attendant on the operation. The substances to which we refer, are peat, or "muck," straw, and other vegetable matters, the refuse of the barn and stock-yards. These substances contain the elements of vegetable nutrition, but in their crude state cannot be used with as much advantage as after they have been passed through some process of preparation. Peat is known to abound in fertilizing elements, but in its natural state these elements are combined with others, which, so long as the combination exists, prevent the favorable action of those which would afford food for plants. The chief deleterious principle is *tannin*, or tannic acid, and experience has shown that if the peat is passed through a fermentation in combination with animal manure, this principle is dissipated, or rendered innocuous. Perhaps the cause why peat is so much improved by being fermented in connexion with manure, is not fully ascertained. It has been suggested that the ammonia of the manure, being an alkaline salt, destroys or neutralizes the acid of the peat; but whatever may be the cause, the beneficial effect is unquestionable. Statements in regard to the value of peat compost have frequently been given to the public by those who have tried it. A compost of two parts stable dung with one part peat, mixed together and rotted, has been proved to be of equal value for most crops, to the same quantity of manure unmixed. Here, then, by the process of composting, we increase the quantity and value of manure thirty-three per cent.

It is sometimes objected that manure is wasted by fermentation. It is true that if a *high* degree of fermentation goes on in manure which is unmixed with absorbing substances, the carbonaceous matter may be more or less consumed, and the nitrogen being set free, may escape. But if the fermentation is properly regulated, and the manure is duly mixed with substances which will absorb the gases, no such waste can take place. Peat is of a similar nature to charcoal, which is known to be a most powerful absorbent, being capable, it is said, of absorbing ninety times its bulk of ammoniacal gas. It is easy to see, therefore, that peat would tend to prevent the escape of those important elements in manures, which, by fermentation, may assume a gaseous form.

While, therefore, we would not advise the fermentation of manures by themselves, we think we have shown that there is a manifest advantage in composting—the advantage consisting in the increased value of a mixture of materials, beyond the value or benefit to be derived from them when used separately.

The operation of composting may be in part carried on while the manure is accumulating. Substances should be used daily which will prevent the loss of urine or any liquids which might otherwise escape from the heap. If animals are kept in barns or stables which have cellars under them for the reception of the manure, the liquid portions are saved with much less trouble than under other circumstances, as it is only necessary that the bottom and sides of the cellar should be sufficiently tight to prevent any soak or leakage. The manure should be leveled occasionally, and a sufficient quantity of muck or litter should be from time to time thrown over it to absorb the liquids and render the mass of the proper consistency to be carted with convenience.

Where there is no cellar under the barn, the animals should be well supplied with litter; and muck, or peat, which was previously in a tolerably dry state, may be kept constantly under them, excepting when the

weather is so cold that it would freeze. Charcoal dust from the beds or bottoms of coal-pits, is preferable to peat for using under animals, as it is generally dryer and will absorb more liquid. A quantity of peat, or coal dust may be kept in some empty stall, or in a corner of the barn, where it will seldom freeze, if the barn is as tight and warm as it should be for the comfort of the cattle. Sheep pens or yards should have a layer of muck, of several inches in thickness, spread over them in the fall, before the sheep are taken in; this will absorb the urine, a considerable portion of which would otherwise soak into the ground.

In making compost heaps, the different kinds of manure should be so mixed that the fermentation may be equal and uniform through the mass. The manure of horses and sheep has a much greater tendency to ferment than that from neat cattle, and when piled by itself it is liable to acquire too high a degree of heat; but by mixing all together this tendency is counteracted, and the quality of the whole is improved. In forming the heap, a layer of muck should be put at the bottom, then a layer of manure spread evenly over it, and so on in alternate layers, covering the whole at last with muck to absorb the exhalations. Considerable moisture is necessary for proper fermentation—the heap should neither be too wet nor too dry—either extreme will retard the process. If the manure has been kept in a cellar, and all the urine voided by the animals has been added to it, it will be sufficiently moist. Urine, on account of the large proportion of nitrogen it contains, greatly increases the tendency to fermentation. In some instances the liquids of stables are conveyed to tanks constructed for the purpose, from which the liquid is pumped up and thrown over the compost heap. Sometimes the manure is piled near the tanks, and is mixed with corn-stalks, peat, or any rubbish which it is wished to convert into manure, and by means of a spout the urine is conveyed over every part of the heap. The drainage goes back to the tank, so that none is wasted. This is a very good plan, and a good compost may be made in this way in a short time.

As to the time required for reducing compost to the required state of rottenness, something, of course, will depend on the state of the weather, and the nature of the materials used, as well as on the extent to which the decomposition is to be carried. In cold weather more time will be required than in hot weather, and the finer and more rotten the manure is to be made, the more time will be taken. Some difference of opinion exists as to the state in which manure should be applied to produce the greatest effect. Rev. W. L. RHAM, in the "*Dictionary of the Farm*," observes—"The best state in which dung can be carried to the land, is, according to the best informed practical agriculturists, when the straw is so rotten that it readily breaks into short pieces, without having entirely lost its form; it should then be of a brown or mahogany color, uniform throughout the mass." This may be a good rule, and it is probable that where peat was used in the compost, it would have undergone a sufficient fermentation, and have become sufficiently impregnated with alkaline salts, by the time the manure had been brought into this condition. Practice and observation, however, can soon determine the point.

In this climate, manure is not usually wanted for Indian corn before the middle of May, and if it is composted a month beforehand, it will generally be found sufficiently reduced by the time it is wanted. If it is turned over once, the fermentation will be more complete, and the mixture of the various materials more perfect. If it is not turned over, it should be cut down in such a manner, at the time it is carted to the field, that the coarser parts may be made fine, and the whole well mixed. If the heap should become too hot while fermenting, as may be known by the heat imparted to a stick thrust into the middle, holes should be made with an iron bar or stout stake, to give ventilation; or the heap may be turned over. If the temperature is so high as to heat the stick to the degree that it will burn the fingers, when it is drawn from the pile, it is consuming the manure, and should be checked.

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MANNER OF APPLYING MANURE TO THE SOIL.—There is much difference of opinion in regard to the best mode of applying manures. Some hold that they should always be plowed in, and give as a reason that "manure never goes down, but if lost at all it is by evaporation." Others go counter to this rule in all respects, and contend that "surface manuring" is far preferable—that the valuable principles of manure cannot be carried off by the air, but are only in danger of being lost by "leaching." The advocates of the two systems may be regarded as in a situation similar to the two knights who fought over the white and black shield—both are in part right, in part wrong.

As regards the position that manure is never lost by going downward, every man's observation may have taught him that it is an error. Whoever has examined the earth under his manure-heaps, or in his barn-yard, must have found palpable evidence that the fertilizing elements of manure may penetrate to a greater depth than is commonly reached by the plow. In one instance within the writer's observation, the surface of the ground where a barn had stood was carried off to the depth of eighteen inches to two feet, and yet for several years afterwards the spot, (though in the midst of a field,) was plainly discoverable in the increased luxuriance of the crops it produced. The cases cited may be said to be extreme ones, but they show that the theory to which we refer is false.

The idea that nothing can be lost from manure by exhalation, does not seem to be any better supported by facts than the opposite theory previously considered. Carbon and nitrogen, which constitute the chief elements of manure, are both capable of assuming an aëriform state. The nitrogen, which exists in manure for the most part in the form of ammonia, readily becomes volatile, and escapes into the air. The escape of this substance from manure heaps and fermenting urine, is readily perceived by the strong smell emitted. The dung dropped on pastures by cattle and horses, does comparatively but little good. It mostly dries up, and loses its value. If all the strength of it soaked into the soil, should we not see a greater effect from it? The urine dropped by animals is immediately absorbed, and the effect is sooner or later strikingly seen in the rankness of the grass.

The true point to be observed in the application of manures, is to place them where none of their value shall be wasted, and at the same time in a situation to be acted on by the agents of decomposition. These agents are chiefly heat, air, and moisture. Heat is required, because in its absence substances are without change; air is required because oxygen, a kind of air and a part of the atmosphere, is the greatest decomposing element in nature; and moisture is required because its absorption by objects admits the entrance and action of oxygen. Light, also, (and perhaps electricity,) exercises some agency in decomposition. The medicines of the doctor and apothecary are sometimes decomposed by the influence of light, even when contained in vessels which are perfectly impervious to the air. It is on account of this influence that wines and other fermented liquors are kept in the dark. Every one may have noticed the effect of light in making vinegar, and may have seen how the souring process is hastened by setting the barrel where the sun will shine on it, and by turning the rays on the liquor by putting a bottle in the bung-hole.

The influences essential to the germination of seeds, are nearly the same as those which promote decomposition. The seeds of some plants will remain inert, when buried deep in the soil, for an indefinite period, and on being brought near the surface, or within the influence of heat, air, and light, will germinate and produce perfectly healthy plants. Instances of this kind are within the observation of every farmer. When a furrow-slice of seven or eight inches in thickness is turned over in a rich soil, (though that soil may not have been plowed for years before,) the newly exposed surface soon teems with a growth of plants, produced from seeds which could not vegetate under the deep covering where they had been placed.

Now it follows from our previous reasoning, that the circumstances which would prevent the germination of seeds would prevent or retard the action of manures. We conclude, therefore, that manure lying at the bottom of a furrow eight inches deep, would be of much less benefit to growing plants than if it was only from two to three inches below the surface.

From the principles above laid down, the following rule is deduced in regard to the application of manures. That it is best to keep them near the surface, well mixed with earth, in which situation they are most readily brought into a soluble condition and rendered available to the support of plants—their valuable qualities being neither liable to be dissipated by the atmosphere or washed too deeply into the soil.

An exception to this rule is made in regard to soils which it is wished to render more loose and friable by strawy manure or fibrous vegetable matter.

AGRICULTURE AND RURAL ECONOMY OF EUROPE.

RURAL NOTICES ABROAD—No. III.—By Caius.

The Campagna about Rome.—All the implements which the *fattore* or farmer can use, are of most homely and inefficient construction; the import duties being so enormous, that no improved machinery can be introduced except at a ruinous cost. The same suicidal policy has hitherto prevented the introduction of new species of grain, or new methods of tillage. Another obstacle to the profitable cultivation of the Campagna, lies in the unhealthy state of its atmosphere during several of the months of summer and autumn. The grain, after being sown under the careless mode of culture of which I have spoken, has hardly begun to ripen over the plain, when the herdsmen are obliged to withdraw their cattle to the pasture lands upon the Sabine hills, and such few as linger latest upon the Campagna, pant and groan under the stifling atmosphere. Meantime the grain yellows under the hot sun; there are no wandering flocks to disturb it; not a stray beast can be seen over the rolling land. Even the couriers or post-riders, and *fattore*, looking after their crops, make haste to get over the ground of the malaria. In this season the corn is ripe, and must be cut. A few of the most wretched of the mountain peasantry are tempted by the offer of large prices, to come down to the harvesting. Under the influence of the heat and the foul air, they of course perform the work indifferently, and little or no method can be observed. Many poor fellows fall victims every year to the malaria of harvest time, and more still carry back with them to their mountain homes, frames irreparably enervated by the influence of a single summer's campaign. The grain is often injured by wet, still oftener by neglect, and I have seen it lying upon the ground, as left by the reaper, a fortnight after the harvest, the heads moulded, and the straw nearly rotten. After all, the grain pays its entrance duty, on passing through the gates of the city. After harvest the Campagna is deserted; now and then a courier goes galloping over the roads leading to the mountains, or a post-chaise or a diligence toils along in a cloud of dust, but the fields are desolate, and smoking with the heat, and the evaporation of the water in the ditches. It is thought by many intelligent foreign observers, that a thorough system of drainage would both improve the fertility of the Campagna and lessen materially the effects of the malaria. But the operations for such an end would require to be conducted on too gigantic and liberal a scale for the bigoted and resourceless papal government.

In the nearer neighborhood of Rome, and of the towns upon the borders of the Campagna, the rotation is from grain to grasses—the field resting a year or two in grass only. Farther from the towns, grain is put in only twice in a period of ten years.

Vast tracts of land, not only upon the Campagna, but upon the mountains, belong to the princely families of Rome,—embracing sometimes whole towns in their circuit, the rental of whose houses goes to sustain the splendor of a princely life. The princes themselves know little and care little for the management of the lands which are subject to their control. They deal through their secretaries with the *fattore;* the fattore secures his commissions, and a good rental to the Prince, and he is satisfied. Perhaps the princely family leaves the city a day or two in autumn, to pass the time at some old villa upon their Sabine estates; in that event, they have troops of city friends, and give grand dinners, and wander to the sound of music and fountains, between rich linden hedges, and through clipped avenues,—but of their farm lands they never inquire.

Prince Borghese has latterly given more attention to the cultivation of his estates—perhaps through the influence of his wife, who is an English lady. Near his villa grounds by the city, he has introduced the cultivation of the turnep, and upon his hill lands has encouraged more thorough tillage, and a scientific rotation. Prince Rospigliosi is still more zealous; his estates lying near Palestrina, are under the most orderly management of any that I observed within the Papal territory. The land was well plowed—improved implements having been introduced; the crops had been well attended—the hedges, where they existed, in excellent order, and the ditching, where rendered necessary, well laid out. It was upon his estate that I observed the only true American stone wall which I remember seeing in Italy. The Prince is much beloved by the peasantry, and by his superior culture is enabled to pay more generously than most other proprietors. Many laborers are furnished with a neat cottage, a bowl of soup, and a small bottle of wine per day, with from one to two pauls, as the season may demand. The workmen are contented at their labors, but do not seem efficient people. They may be seen by crowds every Sunday during the winter at Rome; they collect in their steeple-crowned hats in the old portions of the city, and after saying mass devoutly at some church of the neighborhood, make bargains with the *fattore*, who meet them on those occasions, for spring and summer service upon the hills. By three or four of the afternoon,

they retire to some wine shop, and after drinking and dancing an hour, they shoulder their pack, which they bring in order to be in readiness to serve a new master, and go out again, back over the Campagna. Houses are rarely seen over this rolling plain; only here and there some tall stone building lifts itself from the level, and sometimes a little smoke oozes from the top into the blue sky. What the buildings have served for in past days—whether look-out places for bandits, or towers of princely families, it is not my present purpose to inquire. Now-a-days, a herdsman takes up his abode in them, and lives upon stores of cheese, and bread, and wine. Perhaps he keeps a shaggy pony or two upon the first floor, and a cart. In the loft above is placed the grain, and between bare stone walls, he makes his cot of straw. At the foot of the building he may have thrown a little enclosure about a patch of cabbages, and a goat or two scramble over the broken walls around, and furnish him his supply of milk. The farm-houses proper, at the edge of the Campagna, and upon the slopes above, are different. They are substantial, low buildings of stone, a square court walled in, and where height of building will admit, the stables under the living quarters of the family. They possess no neatness, and are only picturesque, as being gray and old, and always prettily situated. The vineyards come up to the very edge of the court, and are planted as in France, in rows, and trained to the same height to poles. A rude hawthorn hedge, will perhaps enclose a vegetable garden near the premises. In these will be seen growing, turneps, potatoes, cabbage, and a species of dill or fennel, a great favorite with the Romans, and eaten as we eat celery, earthing the stalks to blanch them.

CAIUS.

COLMAN'S EUROPEAN AGRICULTURE--PART 8.

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THIS number opens with a continuation of the subject of "CROPS." He describes at length the different modes of cultivating wheat, showing the advantages claimed for the broad-cast, the drilling, and the dibbling systems. He thinks drilling is greatly to be preferred to sowing broadcast. The first advantage is the more equal distribution of seed, the next, the greater chance the plants have of spreading, and the third, the opportunity it affords of cleaning and cultivating the crop. He observes—"I am of an opinion, borne out very strongly by facts which have come under my observation, that wheat in the early period of its growth, is as much benefitted by cultivation as any plant which is grown; and the injury which is done, both to the growth of the plant and to the sample of grain, by the weeds which ripen their seeds among it, renders the weeding or cleaning of the crop of great importance."

The main saving or advantage in dibbling, is in the quantity of seed sown; but against this advantage is to be placed, says Mr. C., "the danger from insects and frost, and the imperfect germination of the seed." He does not, however, attempt to decide in regard to the relative value of dibbling compared with the other modes of sowing or planting wheat; but it may not be improper to remark in passing, that from all we can learn, the dibbling mode is less approved in England now than it was a short time since.

TIME OF HARVESTING WHEAT.—In regard to the proper time of harvesting wheat, Mr. COLMAN observes that it has been a matter of much discusssion; but in his opinion, "the results of repeated experiments, with a view to determine the best time, all point to an earlier rather than a late cutting." "The best rule for harvesting," he continues, "is not merely when the stalk below the head has changed color, and the circulations have consequently ceased, but when the grain, though it has ceased to yield any milk upon pressure, is yet soft. It then ripens well in the sheaf; it yields more and better flour; and none is lost by shaking, as when it is suffered to stand until it has become dead ripe."

Mr. C. remarks that wheat is seldom put in barns in England; but is generally made into stacks, which are laid on "staddles" made either of wood or cast iron, about eighteen inches or two feet in height. When placed on these, it is inaccessible to rats, and if properly put up, will keep any length of time. He states that—"in parts of Cambridgeshire, where the stacks were placed on the ground, they were plastered with lime mortar about two feet from the ground up, and whitewashed, which was regarded as a preventive against vermin." It is claimed that wheat is not so likely to be heated in stacks as when stored in barns; but it is observed that the "thatcher's art is a matter of great skill and experience; and as long as wooden barns are erected among us at so small an expense, it can scarcely be expected that we shall have patience to adopt it." As an "agricultural picture," however, he observes that he knows of nothing "more beautiful than a neat farm-house in the midst of a crowded and well-thatched stack-yard."

As to kinds of wheat, Mr. COLMAN mentioned "Hunter's" wheat, which is the kind most extensively cultivated in Scotland; the "Chidham" wheat, the "Whittington" wheat, and the "Talavera" wheat; but he adds—"in truth, I have seen none superior to kinds common in the United States, especially the white western wheats. Indeed, the bakers here, for the purpose of producing the finest bread and confectionary, prefer the best American flour."

Of the average yield of wheat in England, Mr. C. is no doubt correct in the supposition that there is no country where it is so large, though the product, he states, has there "doubled within the last thirty or forty years." He says—"I am quite aware that, in many parts of England, the crops are still small, and do not exceed sixteen bushels to an acre; but on the estate of the late Mr. Coke, afterwards Lord Leicester—where, when he came to reside on his property, it was thought, on account of the thinness and poverty of the soil, wheat would not grow,—the average yield is from forty to forty-eight bushels per acre; and I have already referred to a large farm where the crop on the whole farm, in 1844, '5,—a most favorable season—averaged fifty-six bushels per acre. These are most encouraging results; since, beyond all question, in an instance referred to, eighty bushels have been produced, who will say that the limits of improvement have been generally even approached? All this too has been, without doubt, the effect of improved cultivation."

OATS.—Oats are cultivated largely in Great Britain. In Scotland and Ireland, they are cultivated extensively for food for the population; and when the meal is of the best quality, in some forms in which it is cooked, it is not only palatable, but extremely agreeable. Porridge is prepared merely by boiling it in water with some salt thrown in until it reaches a proper consistence, and in this form is ordinarily eaten with milk. Brose is prepared simply by scalding the meal with boiling water, and throwing in a little salt. * * * It will not do to say that it is not a nutritious substance. The allowance, formerly, for a Scotch laborer, was a peck of oatmeal per week, and two scotch pints, or four quarts of milk per day; and this comprehended the whole of his subsistence. Where more hardy or more skilful laborers are to be found; where we are to look for a finer race of people than the Scotch,—more erect, more muscular, more energetic, with more of physical or of intellectual power, I know not; and this dish is, perhaps, never absent from a Scotch table, and with a large portion of the Scotch, constitutes their principal food."

The methods of cultivating oats in Britain, it is said,

do not differ widely from the methods prevailing with us. They are sometimes sown broadcast, and sometimes drilled. In the latter case four bushels of seed is sown per acre; in the former, as much as six bushels is sometimes sown. The reason given for so large a quantity of seed, is, that though oats will tiller, yet the side shoots are seldom of much value, and it is best, therefore, to sow seed enough to give the requisite number of stems. In yield, Mr. C. states that "the crop varies from 30 to 60, and sometimes 80 bushels per acre." In regard to harvesting, he says—"it is strongly advised to cut oats early, as soon as the stalk turns yellow under the head, and even while the other parts of it are green. None are lost in such case by shaking out; the grain itself is brighter, and the straw is saved in a much more palatable condition for the animals to whom it is fed."

The "potato oat" is said to be much esteemed. "The grain is short and white, the panicles well filled, and it is usually without beard or awns." It sometimes weighs forty-six pounds per bushel." The "Hopetown oat" is another favorite kind of Scotch oat. "It is esteemed better adapted to light, than strong clay soils. Its weight is as great as that of the potato oat. The black Tartarian oat is another kind said to be much cultivated in England. "They are well known among us," says Mr. C., "having the panicles all on one side;" on account of this peculiarity, they are sometimes called "horse-mane oats," in some parts of this country.

Barley.—The average yield of this grain in England, is stated to be from 30 to 50 bushels, and it usually weighs from 45 to 50 lbs. per bushel. On good loamy soils, it is thought to be more profitable than oats; it is not so profitable on heavy lands. It is principally used for making beer, which is said to be the "favorite drink of all the lower classes, and is seldom absent from the tables of the rich and luxurious." The kind called "Chevalier barley," is most esteemed.

Rye, we are informed, is very little cultivated in Great Britain, and Mr. Colman says he has never seen it used there for bread.

The English Horse Bean, is an important article with the British farmer. It yields on an average, 30 bushels per acre, but sometimes gives 60 or even 70 bushels. One quart of beans is considered equal to two quarts of oats for horses.

Turneps.—The turnep culture has been called the "sheet-anchor of British husbandry;" and from Mr. Colman's account, we should be inclined to think the observation agreed with his opinion. "The turnep crop," says he, "is to be considered the foundation of the improved husbandry of England, in the means which it affords of supporting an increased stock, in the abundance of enriching manure which it thus supplies, and in the cleanness of cultivation to which it leads as a preparation for other crops."

He informs us that "the practice of sowing broadcast, which formerly prevailed, is nearly abandoned." Where land is thin and liable to suffer by drouth, it is preferred to sow them in drills on a flat surface, but on rich soil, it is deemed best to sow on ridges, which, for Swedes it is thought, should be at least twenty-seven inches apart, and of the distance of a foot or more in the rows. The best varieties, Mr. Colman thinks, are the yellow Aberdeen, and the Swedish, or ruta-baga, both which will keep well through the winter, and the Swedes will keep till late in spring.

Mr. Colman admits that the advantages of growing turneps are much greater in England than they can be in this country, on account of the more favorable state of the English climate, both in regard to the growth of the turnep and the convenience of keeping it through the winter. But he says—"I believe our farmers would find a very great advantage in growing esculent vegetables for sheep and cattle, instead of keeping them as is now done, through our long and severe winters exclusively upon dry food. They would be more useful to sheep in the lambing season, and for cows in milk; and though, in fattening properties I know no article, all things considered, superior to our Indian corn, yet they certainly would come most beneficially in aid of that. I do not assert that turneps are the best crop for this purpose, but Swede turneps are certainly among the best. Mangel-wurzel, carrots, cabbages, parsneps, and potatoes, are all useful. * * * The conclusion to which I have come, and in which I am daily confirmed, and with which I wish the farmers of the United States could be more and more impressed, is, that an abundant supply of succulent food should be provided for their stock during our long winters,—first as conducing to the health of the stock; and next, as contributing essentially to the improvement of fattening stock, and as enabling the farmer to keep more stock; and lastly as furnishing him with the best means of enriching his farm, and extending and improving all his other crops.

Potatoes are said to be of better quality in England, generally, than in this country; though Mr. C. says those grown in the northern part of Maine and in New-Brunswick and Nova Scotia, are not excelled by any he has met with. He observes that new land and a moist climate are favorable to the production of the potato in its greatest excellence. Nothing peculiar is stated in regard to their cultivation.

Grass Lands.—Mr. Colman informs us that in laying down lands to grass, the English use large quantities of seed—"from thirty to forty pounds, and these of great variety. In the rotation, the principal plants cultivated are the clovers, and the rye and orchard grass, or cocksfoot. The "*cow clover*" is a permanent, but is more valued for pasture than for hay. In making clover hay, we are told "it is never tossed about and and spread, but simply turned and made up, first into small handfuls, and afterwards into cocks, and it sometimes receives heavy rains without as much damage as we should suppose."

We shall continue our notices next month, giving a summary of Mr. Colman's remarks on "Live Stock."

LETTERS FROM HOLLAND—No. III.

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Utrecht, Dec. 25, 1846.

Messrs. Editors—My attention has been lately directed to that gigantic work of internal improvement commenced some years since in this country, the draining of the Haarlemer Meer, or Lake of Haarlem.

It is probable that many of your readers may have already seen some accounts of this undertaking, but a more particular notice may be of interest. Previous to the 15th century this lake scarcely existed, but toward the end of the 16th, a number of small lakes previously separated, owing to a rapid increase of their waters, burst, and overflowing the intervening space, united themselves permanently into one. The lake is eleven leagues in circumference, and has about 70 square miles of surface. It is somewhat higher than most of the adjoining country, and is only restrained from overwhelming a very large district by enormous dykes. There being no protection from the force of the winds, they produce a terrible effect, and drive the waters against the dykes with such fury that sometimes even all of their strength and solidity offers a scarcely adequate resistance.

North Holland and South Holland are connected but by a narrow neck of land, and only the most constant care and watchfulness prevents the Haarlemer Meer from cutting through this, and converting the former into an island. For a considerable distance it is separated from the Y., another inland sea, merely by a dyke; the Y is lower than the Haarlemer Meer, and the effect of

opening the sluices which connect them, would be to submerge Amsterdam, and a large portion of the surrounding country. The principal outlet is through the sluices of Katugh, where also the Rhine discharges itself into the sea. The annual cost of works of defence, is between $20 and $30,000.

The depth of the lake is 14 feet, six feet of which only are water; the rest is mud, an alluvial deposit brought down by the Rhine. This must be of a clayey character, as it is used very largely in the manufacture of those small, hard, Dutch bricks called *clinkers*, some specimens of which, I believe, are still to be seen in Albany. It is very likely that they came from the bottom of the Haarlemer Meer, and *originally* from the mountains of Switzerland, from whence their materials were washed down and deposited by the Rhine.

It is now six years since the operations necessary to the drying of this lake were commenced. The commerce which passed through it was very great, and it was necessary, therefore, to build a canal around it by which vessels could pass, instead of going across. This canal will also serve the purpose of discharging the waters when pumped up. Of course, a double water-tight rampart, or dyke was necessary, in itself a work of great magnitude. This was commenced in 1840, and is now complete.

The next step was to consider the best means of pumping out the water, the lake having no natural outfall. It was decided to make the attempt by means of three enormous steam engines. One of these called the Seeghwater, is now finished, and in its place ready for work; the other two are in progress, and are expected to be completed and erected during the coming year. They are all made in England, and are remarkable specimens of the perfection of English workmanship; being, I believe, much larger than any ever before made.

The Seeghwater engine discharges the water which it raises into the sea by the sluices of Katwyk; the other two will discharge in different directions, and be located in other parts of the lake.

This engine is erected in a circular house, from which radiate eleven balance beams, working as many pumps. These are all brought up at once by an enormous piston, and then fall by their own weight. The weight of the piston and cross-head, with parts attached, is 90 tons; this dead weight has to be lifted at each stroke, but of course aids greatly in bringing down the balance-beams. The engine is on the high pressure expansive principle, and there are two steam cylinders, one of 84 inches in diameter, within another of 144 inches. The weight of iron in the engine, pumps, &c., is 640 tons.

It will not commence working regularly until March next, but has been tried within the last few months, repeatedly, and found to answer every expectation; 112 tons of water are raised 10 feet at each stroke, 1,000,000 tons in 25½ hours. When the two others add their assistance, 2,800,000 tons will be discharged every 24 hours. The quantity of water to be lifted is estimated at 1,000,000,000 of tons, and allowing for rains and other contingencies, they expect to pump it out in 400 days.

The cost of the Seeghwater engine, pumps, building, and all included, was £36,000, or about $170,000, and the total cost of the pumping, including that of engines, is estimated at not more than £140,000, or about $670,000. 70,000 acres will thus be rendered serviceable to man—will at once be divided into farms and brought under cultivation. The annual cost of keeping it dry, will be between $20 and $30,000, about the same as that of the present works of defence. This annual drainage will probably amount to 54,000,000 of tons.

The introduction of these powerful steam engines forms a new era in the history of draining. The expense of pumping out this lake by wind, would have been £308,000, or about $1,500,000; it would have required 114 mills of the largest class, for four years, and the annual cost of keeping it dry by means of windmills, would be upwards of $30,000.

The prospects of this undertaking are so auspicious, and the capabilities of this new method of draining seem so great, that a proposal is now before the government for draining the Zuider Zee, and it is confidently hoped that permission will be given. An enormous dyke must first be constructed across its narrowest portion, before reaching the Helder. It will enclose a space of about 40 miles in length, and as many in width. Numerous rivers discharge themselves into this sea, and these must be carried across the redeemed country on double dykes.

This undertaking, if carried into execution, will be one of the boldest that the world has ever witnessed, and will be worthy of the ancient renown of the Dutch people, showing the world that in industry and perseverance they have not degenerated. They have not, however, yet learned to move rapidly, and this subject will probably be only one for lengthened deliberations during some years to come. The resolve and the commencement are not so nearly simultaneous here as in England and America. Yours truly, JOHN P. NORTON.

FENCES ON FLOODED GROUNDS.

ALLUVIAL flats are justly regarded as among the most productive of all lands. But serious inconvenience and much vexation often result from the destruction and removal of the fences by inundations. There is no doubt that in most cases the evil might be greatly lessened.

Whatever kind of fence may be adopted on such lands, one great and leading requisite, almost totally neglected, is, *placing the line of the fence, not perpendicularly, but* OBLIQUELY *to the current*. Logs, or other obstructions, then, which may be floating in the current, strike it with much less force; and are soon by a gradual lateral motion, thrown into the main current and swept off.

Different kinds of fence may be adopted. A hedge of plashed willows sometimes succeeds well. It is more effectual when young if planted on a wide ditch bank; and such bank also affords protection during deep floods to the young trees. A board fence, if placed on such a bank will sometimes be sufficient; if there is danger of the posts being drawn by the lifting of the ice early in spring, a two inch white oak or cedar pin, at right angles through the lower end of the post, secured by filling the hole snugly with stones, will be of essential service. Where the current is quite rapid, it will sometimes happen that a bank and ditch cannnot be adopted, on account of washing.

A mode of building board fences on such grounds has been lately described in the American Farmer, and may be of service where grounds are severely swept by floods, and might be placed near the main channel of water, where the oblique, fixed fence could not be adopted, or would not stand. It is made nearly as the common post and rail fence, but movable on a hinge joint at the bottom, fastened to short stumps of posts set firmly in the ground, so that the flood at most only prostrates it, but does not carry it off, and it may be easily and quickly righted again. About three *lengths* of the fence are connected together by a long pole running through the bottom ends of the four posts forming these three lengths, and at the same time running through the upper ends of the stumps just mentioned, three inch holes being bored through each for this purpose. The lower pole turning in the holes in the stumps forms the hinge joint. A similar pole runs through the corresponding upper ends of the posts. The fence is kept in an upright position by slanting braces set on the upper pole. When a flood is so great as to sweep away a common fence, this is only prostrated by the displacement of the braces; and as soon as the water subsides, it is very quickly set up to its original position. T.

MODE OF UNDER-DRAINING.

An obstacle to the practice of under draining in this country, is the difficulty or expense of obtaining tiles for forming the drains; many neighborhoods, however, ever, abound with a material which will answer nearly as well—that is, small stones. We have seen them used in a few instances, and the drains thus formed have operated well for a long time. We presume that drainage would be more frequently resorted to, if it were generally known that the stones, which in many sections occupy the soil to the actual hindrance of cultivation, could be used with good advantage in filling the drains. From a series of articles which have been published in the *Farmer's Magazine*, on the "Agriculture of Aberdeenshire," it appears that stones for filling drains are "almost exclusively" used in that country. There appear to be several modes of forming drains, and of putting the stones into them. "Many farmers," it is said, agreeably to the Deanston plan, break the stones to a small size, like those used in repairing the public roads; and put them promiscuously in to a certain depth. Several others, however, are of opinion that each drain should be furnished with an 'eye,' or open conduit in the bottom.

"The stones employed in draining are procured from two sources, the surface of the ground and the quarry. The small round stones annually gathered off the grass-fields, as well as those brought to the surface by the action of the tillage implements, are carted into heaps in convenient situations, with the intention of being subsequently employed (if necessary,) in draining. The fields in many parts of the country contain a great number of such stones, and they are considered to be peculiarly well adapted for draining; they also constitute an economical material, since it is necessray or proper at all events, to collect and remove them off the ground; and they require little preparation before being put into the drains.

"A kind of drain which was formerly much employed, and is still frequently constructed in particular places, is made in the following manner: A trench of about twenty-four inches in width at the top, from sixteen to eighteen inches at the bottom, and of such depth as the nature and texture of the subsoil, and other circumstances may render necessary in order to obtain a secure foundation on which the stones may firmly rest, is cut through the field to be drained in such a direction as is considered best calculated for carrying off the water. After the bottom of the drain has been made quite even, and all loose soil cleared out, two rows of medium-sized stones, set obliquely, and leaning to each other at the top, like the roofing of a house, are carefully laid for the passage of the water. If the drain be narrow, and the stones employed are of tolerable size, the whole of the water passes through between these two rows; but if the stones be small, and a large flow of water is expected, there are two and sometimes three rows of these couples, with a flat stone between every two rows, which, together, will void a considerable stream. A quantity of small stones collected off the fields is then thrown promiscuously above these, until the top of the drain is within sixteen or eighteen inches of the surface of the gronnd. The stones being rendered uniform on the top, are covered either with heath or turf cut from the adjacent land, if the field is in grass; after which a sufficient quantity of the earth thrown out in excavating the drain, is returned, and the rest scattered over the ground. This description of drain is sometimes employed as a 'leader' for receiving and conveying away water from small drains; and by using pretty large stones for couples, a copious stream will be voided by a drain so constructed. It is also well adapted for conducting water from springs, is easily formed, and will continue in efficient operation for an indefinite period, provided proper care is taken in its construction."

The advantage of using stones of so small a size as is mentioned, we do not readily discover. It is stated that they are in some instances broken down to a size that will pass through a ring two and a half inches in diameter. The practice, however, of filling drains entirely with such small stones, is not considered proper in all cases. A great proportion of the land in Aberdeenshire which stands most in need of draining, is said to abound in ferruginous matter or iron ore. In many places an indurated stratum, known by the name of "*moorband pan*," has been formed between the soil and subsoil. The writer observes, that—"wherever the oxide or peroxide of iron exists in any considerable quantity in the soil, it is considered injudicious by the majority of Aberdeenshire farmers to drain with broken stones put in after the Deanston fashion, though they are almost unanimously of the opinion that this is the best method that can be adopted in the draining of land containing only a due proportion of iron." The objection to filling entirely with small stones in such soils as above described, arises from the fact that the ferruginous matter in making its way through the stones, leaves, and ochery deposit, which in time renders the drains useless by obstructing the passage of the water "In several instances," it is said, "drains filled with broken stones have had to be re-opened in consequence of becoming choaked up. when the deposit alluded to was discovered, and at once accounted for the progress having been impeded." It is therefore concluded that the only safe mode of draining with stones such land as described, is to furnish each drain with a well formed 'eye,' which affords a channel for the free passage of the water.

The mode of forming the "eye," is to make a low wall on each side of the bottom of the ditch, which is covered by flat stones. The height of the eye is nine inches, and the width commonly about seven inches. If the bottom of the ditch is soft, it is paved with round stones previous to laying the sides; and in fact it appears to be considered advisable to pave the bottom of all main drains, as there is a liability of the water affecting the foundation, and endangering the safety of the drains. But it should be remembered, that it is only in the ferruginous soils above described, that eyes are deemed necessary; as in all other situations the mere filling with stones is believed to be equally if not more efficacious and durable than those formed in any other way.

Yield of Wheat from a Single Head.—Mr. Colman mentions that Mr. Jonas, of Cambridgeshire, England, in 1838, dibbled in 50 kernels, the produce of one ear, 30 of which only grew. The product was 14¾ ounces. This being sown in 1839 produced 1¼ bushels; which was sown in 1840, and produced 45 bushels, and this in 1841 produced 537 bushels. He also mentions a case of remarkable increase from eighteen ears in four years. The first produce of these ears produced 7¼ bushels, the second 108¼ bushels, and the the third 1868 bushels.

THE POTATO DISEASE.

We have lately received a crowd of communications in relation to the malady which has so generally attacked the potato throughout a large portion of the world. As we cannot see that the public good would be in any way subserved by the publication of matter which throws no new light on the subject, we have concluded to dispose of these communications by giving a brief summary of them in a single chapter. We are satisfied that all speculations as to the cause of the trouble have amounted to nothing, so far as regards the point aimed at; and this is the conclusion to which those who have devoted the most time and attention to the subject have generally come. And as to remedies, we agree with Prof. Fromberg,* that "until the cause of this disease is known, no efficacious remedy can reasonably be expected to be found. It is," he adds, "the department of science to proceed from *fixed* points, from causes into effects, and every other way is hardly deserving of any other name than empiricism."

As to the extent of the disease in this country, we hear of it from New Brunswick and the Canadas, to the Carolinas and the country bordering on the Mississippi, though within this area there are some neighborhoods where it has not yet shown itself. It is generally said to be less prevalent on dry than on wet land.

Levi J. Hopkins, Throopsville, Cayuga Co., N. Y., writes—"the potato disease seems to be universally prevalent through this region, though differing in destructiveness on different soils. It prevails least on sandy and most on clay soils. * * * Here, as everywhere else, no one can give any reason as to the cause. Early planting is generally considered best. When dug they should be put in a dry place—putting them into pits, in the usual way, seems to be sure destruction to them."

A. W. Howlett, of Castile, Wyoming County, N. Y., writes—"My potatoes were all sound this year and remain so. There were not many rotten ones in this section the past season."

Samuel Waring, of Morrisdale, Pa., states—"Potatoes have rotted very generally, particularly when they were planted deep, or manured with much fresh dung."

Ralph R. Phelps, of Manchester, Ct., states that the disease has prevailed in that section, and that it appears to have extended itself to turneps, beets and cabbages.

John F. Allen, of Newport, Herkimer Co., N. Y., states that a friend of his accidentally had some potatoes planted on buckwheat-stubble, which produced a crop free from rot, while others, in similar circumstances in other respects, were lost. He mentioned the fact to his neighbors, several of whom stated that the same thing had occurred in their experience. He therefore advises that buckwheat straw be spread on the ground planted to potatoes. He says the blight has not been confined to potatoes, but in his neighborhood has been noticed on Indian corn.

We should have about as much confidence in the efficacy of buckwheat stubble or straw, as in the following; both, if sufficiently tried, will probably prove to be no preventive.

Alexander Leeds, of St. Josephs, Michigan, states that a neighbor of his planted, (in 1845,) a pumpkin-seed in every third or fourth hill of potatoes, and that the hills thus treated produced sound potatoes—"the others poor and defective." In 1846 he repeated the experiment by putting a pumpkin seed in *every* hill of potatoes. The potatoes were "fine, large and sound." He asks—"Did the shade of the pumpkin-vines preserve the potatoes, or did they draw from the soil such ingredients as were injurious to the potato?"

S. Ruckman, of Bath County, Va., states that potatoes did not do well in that section the past year.—"They started fair, but soon began to decay." He says he followed the plan of Wm. McCoy, as given in the last volume of the Cultivator, which was to use forty bushels of wood ashes and four bushels of salt to the acre; but he got only an hundred bushels of sound potatoes, where he had expected twelve hundred.

N. H. Waterbury, of Saratoga, N. Y., gives the result of his experience in potato-culture for three years. In 1844 he planted the last of May, in rich ground. The potatoes looked well till the 20th of August, when the disease attacked them. Full one-half of the whole crop was lost, and some varieties were not worth digging.

In 1845 he planted on the first of May, on ordinary soil, without manure. The season was very dry, and the crop was light, but there was no rot.

In 1846 he planted on the 20th of April. He had a fair crop, and the potatoes were sound and good. He planted a small piece with the "Mountain Junes," manuring them in the hill. Two-thirds of these rotted. In accordance with these results, he advises to "plant warm, quick land as early as the season will admit." He states that he has tried cutting the tops, but "could never see any good effect from it."

J. Petit, of Fredonia, N. Y., states that he has made various experiments in growing potatoes from the ball, from 1842 to 1846. The seedlings rotted as bad as others. He therefore comes to this conclusion—"that the seedling potato insures any special immunity from the rot, is out of the question. Experiments made with greater accuracy than mine, have settled this fact. The cause and the cure lie hidden still in nature's arcana."

We agree to the conclusion in regard to the non-exemption of seedlings. Nearly all the testimony we receive on this point tends to this result. Mr. Norton, in his essay on the potato disease, published in the Transactions of the N. Y. State Ag. Society for 1845, observes—"great stress has been laid upon the necessity of procuring new varieties from seed;" and adds—"it is most unfortunate for those who believe this, that in the whole of the answers to the above question" [in reference to varieties raised from seed,] "there is not one favorable to their theory." Mr. N. gives extracts from the answers. One man states that he had above *sixty* varieties which had been raised on his farm within three years previous, and they had "all been attacked with the disease, and in some cases with more virulence than the older varieties—not one of the seedlings being free from disease." Another man states that he had ten kinds raised from seed two years before, and they were all affected. Several others state that they have used new varieties, and that they were as much if not more liable to disease than older ones.

Elisha Hammond, of Scoharie County, N. Y., states that in 1846 he planted some potatoes in April, some "about the middle of May," and some "about the middle of June"—all on the same kind of soil. He says—"Those that I planted in June did not rot; but they did not yield one-third of a crop. Those planted in May,

* "Remarks on the Potato Disease, by P. F. H. Fromberg, first Assistant in the Laboratory of the Agricultural Chemistry Association of Scotland."—[Scotish Quarterly Journal of Agriculture for January, 1847.]

arrived at about two-thirds the usual size and commenced rotting, and in a few days a large portion of them were a rotten mass; but those I planted in April fully perfected their growth and remained sound." He states that he has made numerous inquiries through Schoharie county, and as far south as Suffolk county, Long Island, and the evidence is in favor of early planting with an "*early kind*." He concludes—"there appears to be a period in the early part of the season that the potato tops are not affected by the blight; and it therefore follows that early planting with an early kind insures the perfection of the tuber before the blight strikes."

LARDNER VANUXEM, of Bristol, Pa., writes—"In general the rot has not been extensive in this section of the country—indeed, it may safely be said that its ravages have been but partial. So also on the opposite side of the river in New Jersey, as I have been informed, with like soil and similar position, our soil being a light loam, underlaid with sand or gravel, readily permeable to water, admitting, with few exceptions, of being plowed at all times unless frozen; the wells generally from 10 to 18 feet in depth. * * * I have no doubt that early planting is decidedly to be preferred, and is more generally practiced in this section for winter potatoes than was the case a few years ago."

H. A. PARSONS, Buffalo, attributes the disease to the constitutional decline of the potato. A communication of his in reference to the subject was given in our January number, together with some editorial remarks. In those remarks we observed that the older varieties, so far as our knowledge extended, did not appear to be more subject to the disease than those lately originated, and cited the long-reds, or "merinos," known as an old variety, as being *generally* more exempt from attack than others. In relation to this, Mr. PARSONS, in a communication received since the former one was published, observes—

"What you state in regard to the long-reds or merinos is not verified by my experience and observation. I raised the past summer 60 bushels of merinos, which, when dug, were remarkable clean and bright, and not a particle of disease perceptible except in one hill. They were put under a dry shed, and in three weeks the whole mass was so affected with the disease that, notwithstanding many experiments and efforts to arrest it, I did not ultimately save six bushels of sound ones out of the sixty. They rotted with amazing rapidity, and the effluvia arising from them was very offensive. I have been in the habit of examining almost daily for four months past, the potatoes brought to this city in the market wagons from the surrounding country. They come more or less from five counties, viz:—Erie, Niagara, Genesee, Wyoming and Chautauque. Every load of merinos that I have yet seen, has exhibited symptoms of the rot; and so of nearly all other varieties. Occasionally a load has been brought in that appeared fair and sound, and the answers made to my inquiries have been that they grew on new land, or were a new and extraordinarily fine variety, &c. Every load of good ones would be set off by some extra story as to the why and wherefore—implying that disease was the established rule, and health the rare exception."

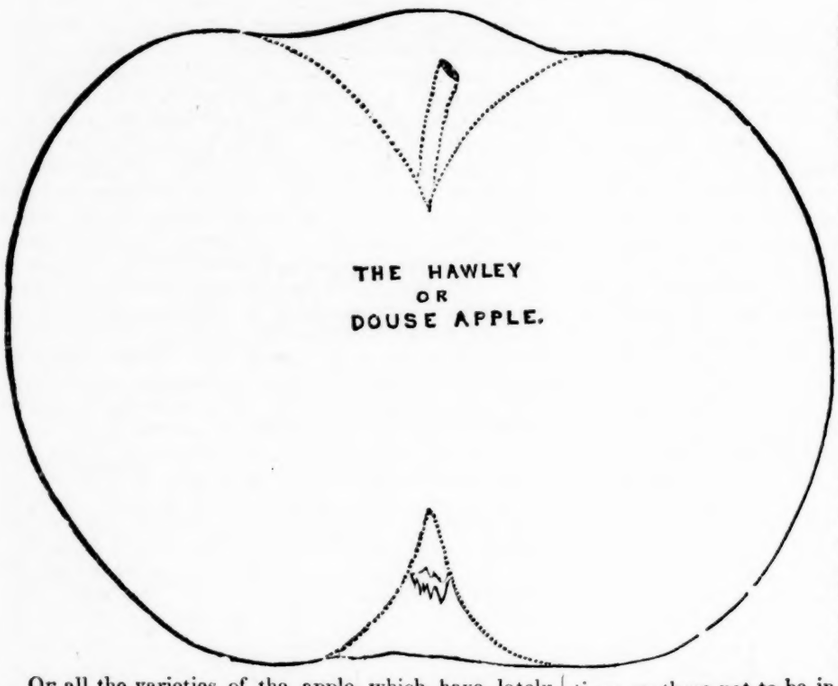
THOMAS CLOSE, of Portchester, Westchester County, N. Y., observes that the potato crop in his vicinity was visited with two distinct and separate attacks, the first occurring the last week in July, and the second about the 20th of August. We have before mentioned that the same circumstances in regard to the disease were noticed in this neighborhood, and we have heard of them in other sections. Mr. CLOSE observes that the second attack must have been much more severe than the first, "as nearly all the earlier potatoes perished in this attack which escaped the first; while the late planted crops, which were too young to feel much of the July attack, and which continued flourishing till about the 20th of August, were then nearly all exterminated." But he states that the few potatoes which "escaped the two pestilential periods, have kept as well as if nothing unusual had happened."

Mr. CLOSE attaches much importance to these facts. "If," says he, "they do not point us directly to the cause of the disease, they show at least that many things to which it has so often been ascribed, could have had no share in its production. A clear inference is, that whatever may have been the cause of the mischief, it must have been very sudden in its onset, and very transient in duration. * * * This seems entirely to set at rest all the conjectures respecting the agency of insects and of fungus in the production of the disease. The most fanciful imagination can form no conception of an insect attack so sudden, so overwhelming, and yet so capricious and evanescent as this must have been to accord with known facts; while the fungus, that so many have detected in the decaying tuber, is obviously an effect and not a cause of the decomposition. Nor is there any better grounds for ascribing the disease to the ordinary but ever-varying states of the atmosphere depending on temperature, or too much or too little rain. These are *ordinary* conditions, but surely it requires *extraordinary* ones to cause that to happen to the potato now, for the first time, which has never happened to it until the commencement of the present epidemic."

The conclusion to which Mr. CLOSE arrives from all these facts and circumstances is, that the cause of the malady in question "belongs to that class of mysterious agencies to which the epidemic diseases of the animal world have always been ascribed." He thinks, however, that "though the specific cause of this malady may be unknown, or if known entirely beyond our control, it does not follow that the disease itself may not be mitigated by carefully studying the laws by which its action seems to be governed. Many observations have shown that very early planted potatoes are much less liable to the disease than later crops. In deep and moist soils, and grounds recently and freely manured from the barn-yard, the disease has been found far more destructive than on dryer or thinner soils, or where saline substances have been the fertilizers used."

Conclusion.—It will be noticed that a large portion of the communications speak of early planting as having been more successful than late, and such, with a few exceptions, is the nature of the testimony we have received during the three last years. Though we do not regard early planting as a specific against the disease, we think we are safe in recommending its adoption. There is no doubt that in this country, thus far, the early planted crops have generally succeeded best. We attribute this success solely to the crops having reached maturity, or nearly reached it, before the disease manifested itself. Had the disease occurred at such a period that the early-planted potatoes would have been in the same stage as the later-planted ones have been, at the time of their being attacked, we presume they would have fared alike. Unless the attack should occur earlier the coming season than it has in former years, we shall look for the same advantages from early planting as have been before obtained. It may be proper to remark that in Europe, so far as we can learn, no particular benefits have been derived from early planting. Fall and winter planting has been resorted to in order to have the growth of the potatoes as forward as practicable the next season; but they have fared no better, so far as regards the disease, than others. The reason is the attack has occurred there at an earlier stage of the plant than it has here. At what precise time it may appear the coming season is more than any one can tell. Its appearance last year was considerably earlier than in any former one; still, judging by the past, we are decidedly of the opinion that early planting is safest in this country.

THE ORCHARD AND THE GARDEN.



OF all the varieties of the apple which have lately been brought to notice, probably none is destined to become more and deservedly popular than the Hawley or Dowse. This and the Fall Pippin, are nearly the only apples of the largest size, which prove of first rate quality, or which are not cultivated chiefly for their showy appearance. It is superior to the Fall Pippin in the fairness of its fruit, and is generally regarded as preferable to that fine variety, by those acquainted with both.

Its precise origin appears at present to be unknown. Its cultivation is chiefly confined to Tompkins county, and the south part of Cayuga county, in western New-York. Specimens were exhibited at the State Fair at Auburn, by E. C. Frost, of Catharine, Chemung Co. It is said that the original name was Hawley, but was changed to that of Dowse, from the name of the grafter who introduced it, and by which it is now generally known.

Description.—Very large, nearly round, slightly flattened, somewhat irregular, and slightly ribbed; yellowish green, usually passing to pale yellow when ripe; stalk slender, three-quarters to an inch long, set in a wide deep cavity, and usually scarcely projecting to the rim; calyx in a narrow and rather deep, regular, and somewhat furrowed depression, though sometimes but slightly sunk; flesh of fine texture, very tender, subacid, and of excellent flavor. It ripens from the first to the middle of autumn. The tree in the nursery is of moderate growth, but in the orchard it forms a well-spread and good shaped tree, and produces good crops every year. T.

MANAGEMENT OF FRUIT TREES, &c.

Seasonable Hints.

ORCHARD CATERPILLARS.—Take them early, and their destruction is easy; let them flourish for a while, and the labor is greatly increased. Early in the month, their eggs will be found in nests or belts encircling the young shoots, and near their extremities; and at a few feet distance appear like small knobs on the branches. They are now quickly clipped off and burned; every one thus removed preventing a large nest of caterpillars. As soon as the buds begin to open, they hatch; and remaining for a few days on their small nests, give them a conspicuous downy appearance. At this period they may be easily destroyed, but soon after, if left, they increase rapidly in size and in their depredations.

PREPARING FOR TRANSPLANTING.—Those intending to set out new orchards or fruit gardens, should have the ground well prepared in season, by digging ample holes, and in preparing the soil in the best manner. Let the holes be six or seven feet across, and all the outer portions, or those not to be in immediate contact with the roots, filled beforehand, if convenient, with old rotted manure thoroughly mixed with soil. This will give the young trees a vigorous start, until they come into bearing; and in the mean time the whole ground should be gradually enriched by manuring the crops. It would be still better, if the ground for the young orchard could be well prepared for two years previously, in the following manner:—First, run the subsoil plow as deeply as possible, to loosen the soil for the entrance of the common plow for trench-plowing. This will work the manure deeply below the surface, which the subsoil plow will not do, and will intermix thoroughly surface soil, subsoil, and manure. Two years of such treatment, with crops of carrots or other roots, will bring the land to the finest order, and even one year would be eminently useful.

YOUNG FRUIT TREES, which lack vigor of growth from too poor a soil, should be stimulated with a good coating of old manure spread round them and spaded in as soon as the frost leaves the ground. All fruit trees, except of the largest size, which do not stand in ground kept constantly cultivated by the hoe, should have the soil for several feet, kept well spaded round them. Soapsuds, especially for peach trees, are fine.

TREES IN BUD, which were inserted last summer, should be headed down to the bud, that it may grow freely by receiving all the sap. To cause the new shoot to grow straight, leave two or three inches of the stock above it, to which the shoot is to be closely tied, to remain till mid-summer, when the stump is to be pared closely to the bud. Many buds are lost by heading down too closely in the spring,—the drying of the wood below the fresh wound causing their death.

RASPBERRIES.—These should be pruned as early in spring as practicable. All the old stems, and all the smaller young shoots should be cleared away to the ground; and about half a dozen largest stems of last year's growth reserved for bearing. Their upper ex-

tremities for a foot or two, should be cut off, being weak and useless, and detrimental from their weight and shade. The remaining stems, if not of a stiff and upright variety, should be loosely tied to stakes.

TENDER GRAPES, STRAWBERRIES, and SHRUBS, which were covered for protection, should, have the covering removed. T.

SELECTION OF THE BEST PEARS.

THE most striking feature in the progress of fruit culture, is, perhaps, the improvement in the variety of our pears. A large number of new and fine sorts have lately originated or become known; and hundreds of foreign ones are under a course of examination. A single orchard in Massachusetts, has no less than eight hundred different varieties.

And this fine fruit is indeed worthy of the attention it receives. Generally adapted by its hardiness, to the northern states; scarcely ever losing a crop by frost; and only second to the apple in productiveness, and greatly excelling it in melting and delicious flavor, it fills a most important place in all good gardens.

The only truly formidable disaster to which it is liable, the fire blight, is becoming better understood and more easily managed. Instant excision and burning the branches, have proved entirely effectual where it has been properly and unremittingly performed. This remidy has,however, failed in most attempts, partly from being too long delayed or not perseveringly pursued; but more frequently from not cutting far enough below the affected part. Most cultivators are content to cut off the *visibly* affected parts only; whereas, at least two or three feet of the branch below should also be taken, as the poison extends downwards, and does not instantly show itself.

Selection of Varieties.—A. J. Downing says, "The most successful cultivator of pears in this country, whose collection comprises hundreds of varieties, lately assured us, that if he were asked to name all the sorts that he considered of *unvarying and unquestionable excellence*, in all respects, he could not count more than *twenty*." But perhaps there is no fruit where different cultivators would more differ in opinion than in this. The peculiar qualities constituting excellence, are greatly disposed to vary in some, and seem to be in many cases very singularly, strangely, and partially distributed among some of the finer sorts. For instance, that most superlatively rich and high-flavored variety, the Seckel, is of quite small size, and slow in growth. The Virgalieu, which in many localities, stands as the first, all things considered, is in others perfectly worthless. It may, however, be said, that the pear, which all good judges pronounce as first rate, must be really fine. Such pears are indeed very few.

Last autumn, when A. J. Downing was at Boston—the focus of intelligence on this subject—he inquired of a number of the most experienced cultivators there, *which do you consider the* THREE *best pears*—early, middle, and late—supposing yourself confined to three trees? In answer, for the best early pear, *five* of the persons asked, named the *Bartlett*, and *one* the *Bloodgood*. For the middle one, (the field for selection being here much the widest,) two chose the *Vicar of Winkfield*, one the *Louise Bonne de Jersey*, one the *Fondante d'Automne*,* one the *Beurre Bosc*, and one the *Seckel*. For the third or late variety, there were three votes for the *Winter Nelis*, and three for the *Beurré d'Aremberg*. A. J. Downing, in summing up, gives his voice for the *Bartlett* and *Beurré d'Aremberg*, for the early and late; and for the middle, at the east and south, the *Seckel*, and at the north and west, the *White Doyenné*, (or Virgalieu.*) The whole number here selected is *ten* varieties,—all of which may therefore be regarded as eminently valuable,—some having several voices in their favor, and others only one. *Six* chose the Bartlett, *four* the Beurré d'Aremberg, *three* the Winter Nelis, *two* the Vicar of Winkfield, *two* the Seckel, and *one* each the Bloodgood, Louise Bonne de Jersey, Beurré Bosc, Fondante d'Automne, and White Doyenné. It appears singular that only a single summer variety should have been selected. the Bloodgood, and that the Vicar of Winkfield, decidedly a winter fruit, should have been placed by two persons as the "middle" variety.

There are a few others which other cultivators would regard as fully worthy of being classed with the above. *Van Mons' Leon le Clerc* has been pronounced by high authority as the best of all pears; yet Downing thinks the *Onondaga* or *Swan's Orange* likely to prove superior, and a cultivator well acquainted with fine fruit, said that if he were confined to *one* variety, he would unhesitatingly choose Swan's Orange. The writer thinks he certainly never tasted a finer pear, all things considered, than the *Doyenné Gris*. For the best very early pear, ripening at usual wheat cutting, or even sooner, the *Madeleine* stands alone; while the *Bloodgood* is undoubtedly unrivalled as its next successor. T.

* This variety, obtained by the writer from R. Manning, has not yet proved of excellent quality in Western New-York It may do better in future, and its failure may have been from some unusual and unknown causes.

TRANSPLANTING PEACH TREES.

A writer in the Horticulturist, thinks it is not advisable to transplant peach trees the first year after budding. This was once my opinion; but I have found that trees planted in the spring, that had been budded the previous fall, did better than if left one year longer. They are more certain of growth, and transplanting them makes little or no difference in the growth. I transplanted some last spring, in the latter part of April or the beginning of May, that have grown more than six feet high. I was first led to this practice from a nurseryman, to whom I applied for some trees, and I thought it at first, nothing more or less than an excuse to sell me the young trees, as he had no older ones of the sort I wanted. But I have found by experience that it is the best way, and all that a person has to do is to take care that they have *living buds*, not what is called by some dormant ones. In a lot that I planted out last spring, I believe I had but one which missed, though I had 3 or 4 that did not start till late, but they made nearly three feet. A. A. MULLETT.

Springfield, Hamilton Co., Ohio.

SOWING FLOWER SEEDS.

COMPLAINTS are very frequent of failure in the vegetation of flower seeds, and the seedsmen often receive abundant censure, when the fault is in the mode of sowing. Minute or rare seeds, if merely buried beneath common soil, can hardly be expected to grow. An experienced cultivator says "their failure to grow in common gardens, I should scarcely consider as any proof that the seeds were bad."

"But," asks the inquirer, "if seeds are *not* to be buried beneath the soil, in what possible way are they to be treated?" Follow nature—not servilely, but rationally—imitate her successful operations, not her failures—adopt such points of treatment as are essential,—without blindly copying everything, as the Chinese tailor did, when he made a new coat with a patch on the sleeve from the worn pattern given him.

Seeds which drop in the forest are never covered deeply, but they are deposited on the surface of a bed of fine mould, and afterwards covered with a very thin coat of partially decayed vegetable matter. Flower seeds should have only a thin sprinkling of fine mould upon them. The seeds in the forest are kept moist by

* Horticulturist.

a shade. Fine seeds must be protected from the scorching rays of the sun, till they have obtained sufficient foothold.

A friend is very successful with such seeds, by screening them. after sown, with small boxes open at the bottom and top, across which a piece of fine muslin is stretched, like a sieve. Light is thus admitted, the drying of winds is prevented, the hot solar rays are much softened, and insects excluded. This treatment will ensure success with many delicate seeds where ordinary modes would fail.

The watering of common soils, by rain or by artificial means, soon forms a thin crust on the surface, unless such soils are of the lightest character, and delicate young plants cannot push through it. The difficulty is obviated by the substitution of peat or fine mould, sifted over the surface when the seeds are sown.

Dr. Lindley says, "When the acorn falls, it has no power of wrigling into a hole in the ground, and when the chickweed scatters its tiny seeds, they lie and grow where they fall." This eminent horticulturist describes a method which can hardly fail with any seeds of temperate climates, which retain vitality. First, provide a good soil, fine and dry; smooth the surface; sift over it a coat of fine mould or peat if the seeds are very small; or mix them with the same material before sowing, if excessively minute. Then press the whole surface gently and evenly. Next sprinkle over the surface some coarse moss, previously soaked in boiling water to kill insects or eggs, and with the superabundant water pressed out. Cover the whole with a common garden pot, and lay a tile on the hole. The seeds are then planted—the moss answering the purpose of the scattered forest leaves in nature, and the pot supplying the shade.

Then, judging from a daily inspection by looking under the pot and moss coating,—open the hole in the pot when the seeds *begin* to grow; the next day, perhaps, remove a part of the moss; the next, raise the pot by a stone under its edge; then gradually raise the pot higher, remove the rest of the moss, and finally take the pot away.

One caution should be added for those who plant large seeds encased in a dry shell, as for instance the horse-chestnut. In the wild state they drop as soon as ripe into moist mould where they remain till germination commences. If packed up and kept dry a few weeks, they will scarcely ever grow. No difficulty of this kind will however occur if they are packed in moderately moist muck from the woods as soon as mature. T.

HORTICULTURAL GLEANINGS.

[*Condensed from "The Horticulturist" and other works.*]

SIX BEST APPLES.—B. V. French, of Braintree, Mass., who has probably given as much attention to the culture and examination of the different varieties of the apple, as any other person in the state, has given the following list of such varieties as stand first for productiveness, fair habit of growth, adaptation to the climate, and fine quality, and affording a succession in ripening: *Early Harvest*, *Porter*, *Fameuse*, *Rhode Island Greening*, *White Seeknofarther*, and *Baldwin*.

FINE MARKET PEAR.—The *Vicar of Winkfield* is remarkably distinguished for its large, fair, and handsome form, and for its extraordinary productiveness; and though only of second rate flavor, it must prove a valuable market variety. Though spoken of as "middle" or autumn variety in "*Downing's Pomological Gossip*," it is evidently an early winter fruit, which must increase its value for distant transportation. Hovey, in his Magazine, speaks of a tree of this variety in the grounds of O. Johnson, of Lynn, as being "literally loaded, and the branches so heavy as to require propping up to prevent their breaking from the weight of the fruit—the tree has borne abundantly every year since it first began."

THE MADELEINE PEAR, or Citron des Carmes, was stated last year by the Committee of the Massachusetts Horticultural Society, to be the best of any of its season, among all the numerous new varieties. Among the numerous localities where this pear has been well tried, we never heard of but one where it did not prove valuable, and that was at Auburn, Cayuga Co., N. Y. It sometimes rots at the core, which may be prevented by ripening in the house; and where it does not prove fine, its quality may doubtless be much improved in this way. The *Jargonelle*, so liable to core rotting, is greatly improved by ripening in this manner, as well as nearly all other pears.

THE BEST TWO STRAWBERRIES, adapted to extensive culture for market, are, according to the opinion of A. J. Downing, *Hovey's Seedling* and *Black Prince*.

SELECT VARIETIES OF ROSES.—Dr. Valk, of Flushing, who has much knowledg of Roses, gives select lists in the Horticulturist, from T. Rivers, the greatest English rose culturist, which may greatly assist those in selection, who are not familiar with the one or two thousand varieties, offered for sale by nurserymen:—

The six sweetest—*Prince Albert*, *Crimson Perpetual*, *Common Moss*, *Old Cabbage*, *Crested Provence*, & *Riego*.

Six finest *large* varieties—*La Reine*, *William Jesse*, *Souvenir de la Malmaison*, *Calypso*, *Brennus*, and *Chenèdolè*—two hybrid perpetuals, one Bourbon, and three hybrid Chinas.

Six most vigorous growing—*Charles Duval*, *Chenèdolè*, *Elise Mercœur*, *Great Western*. *Hortensia*, and *Paul Perras*—five Hybrid Bourbons, and one Hybrid China.

Six earliest *large* roses—*Blairié*, *No. 2*. *Fulgens*, *George 4th*, *Magna Rosa*, *Ne plus ultra*, and *Triomphe d'Angiers*—all hybrid Chinas.

Six earliest *small* roses—*Burgundy*, Chinese Sweet Brier, Persian Yellow, *Rose de Meaux*, *Moss Pompone*, and *Sponge's Rose*.

Six finest forms—*Boule d'Anteuil*, *Coupe d'Hebe*, *Kean*, *La Voluptu*, *Rose Devigne*, and *Triomphe de Jaussens*.

PLANTS IN THE SHADE.—J. Jay Smith, of Philadelphia, gives the following list of plants which thrive well under the shade of trees:—All *Rhododendrons and Kalmias*, *English Ivy*, *Ilex aquifolium*, *and I. opaca*, *Acuba japonica*, *Box*, *Yew*, *Mezereon*, *Privet*, *Red Dogwood*, *Snowberry*, *common Juniper*, *Lily of the Valley*, *Periwinkle*, *Saxifraga umbrosa*, *Monarda didyma*, *Anemone pennsylvanica*. The same cultivator, having been remarkably successful in the cultivation of the rose, attributes his success to a remark he had seen on their management, that they require "to have their feet kept dry;"—that is a deep and well drained subsoil.

CULTIVATING FRUIT TREES.—So great is the loss resulting from stunted and diseased growth, occasioned by neglected cultivation, that an intelligent cultivator gave it as his opinion, that "if nine-tenths of our orchards should be cut down, and the labor and cultivation which they receive be expended on the remaining tenth, *more* and *better* fruit would be raised."

THE ROXBURY AND PUTNAM RUSSETS.—A. J. Downing, after a careful examination of specimens. of the latter, from the original Putnam orchard in Ohio; of the former from Roxbury and Dorchester; and of both from other sources; as well as comparing the growth of the trees,—has fully concluded that these celebrated varieties are identical.

FAILURE OF FRUIT.—Dr. Barratt, of Middletown, Ct., says that a series of observations, have led him to the conclusion. that continued or heavy rains, at the time the trees are in full flower, often causes a failure of the crop, when this failure can be ascribed to nothing else, the rain washing away the pollen, and preventing the fertilization of the germs. T.

AGRICULTURAL SOCIETIES.

ANNUAL EXHIBITION

OF THE

NEW-YORK STATE AGRICULTURAL SOCIETY,

To be held at Saratoga Springs, Sept. 14, 15, and 16.

☞ *The first day to be devoted exclusively to the examination by the Judges of the Animals and Articles exhibited, and no persons will be admitted within the enclosure on that day, but the Officers of the Society, Judges, and Exhibitors.*

.....

List of Premiums for 1847.

ON FARMS.

For the best cultivated farm of not less than fifty acres, exclusive of wood-land and waste land, regard being had to the quantity and quality of produce, the manner and expense of cultivation, and the actual profits—First premium, $50—2d do. $30—3d do. $20.

☞ Applicants for these premiums will be required to furnish written answers to a series of questions, copies of which may be obtained, by addressing the Secretary, B. P. Johnson, Esq., at Albany.

EXPERIMENTS AND ESSAYS.

Stall-Feeding Cattle.—Best experiment in stall-feeding cattle or sheep. A full and detailed statement will be required. 1st. Weight and age of animal when feeding commences. The weight weekly during the process. 2d. The kind and exact quantity of feed and its value. 3d. The weight when slaughtered, and the price at which sold, and the account of profit and loss. 4th. Any other particulars that may be of importance to a full and complete account of the whole process, ... $20

Draining.—Best experiment in draining. 1st. Statement of the situation of the land previous to the commencement of the process—the kind and condition of soil. 2d. The method pursued, with a particular account of the expense. 3d. The result and increased value of the land, if any..... $10

Top Dressing Grass Land.—Best experiment. 1st. Situation of land and of soil. 2d. The kind, quantity, and value of the manure used. The manner of its application. 3d. The results, giving the increased product, &c. To be answered in 1848, ... $20

Root Crops.—Best experiment on not less than half an acre. 1st. State of land previous to crop, and how manured. 2d. The kind, quantity, and value of manure applied, and in what manner. 3d. The kind of soil and the manner of cultivation, with a detail of the expense. 4th. The result, ... $10

Experiments in Fattening Animals on Indian Corn to test its value for that purpose.

ON PIGS.

1. Lot of 10 pigs of about 100 lbs. weight each, in lots of 5; to be shut up between the 20th November and 20th December, and weighed separately when put in—the weight to be registered, as well as the sex, breed, and general characteristics of the pigs, and arrange them in the pen by sex, age, and size; to be fed on Indian corn alone.

2. Weigh a quantity of Indian meal, and feed it at regular hours—to be cooked and fed two weeks, and the corn dry two weeks, alternating the feed every two weeks.

3. Have the pigs kept clean.

4. At end of two weeks weigh each pig and enter its weight, and make an account, to be entered, of how much all have gained, and upon how much feed.

5. At the end of each succeeding two weeks perform the same process, and continue to do so for at least 12 weeks, and sum up the entire gain, quantity, and value of the feed, the market value of the pork, and where marketed, at the time each of the pigs is slaughtered and disposed of:

A premium of $25

For experiments in fattening the like number of pigs, under the same regulations as above, *on any other kind of grain or vegetables*,..... $25

The statements required, and everything connected with the experiment in each case, to be verified by the affidavit of the owner, and at least one other person.

FARM DWELLINGS, &c.

For the best design, accompanied with plans, elevation, and cost of construction, combining convenience, economy, and good taste, ... $20

For the best design, accompanied with plans and cost of construction of a piggery, ... $10

For the best design of a farm barn, with plans and cost of construction, and out-buildings,..... $15

Competitors for the above premiums must forward their manuscripts to the Secretary previous to the 1st of December, 1847, free of postage.

The above premiums for experiments and essays will be open to citizens of other states, as well as residents of this state.

PREMIUMS ON CHEESE DAIRIES FOR 1847.

The number of cows not less than 20. B. P. Johnson, Ch'n Com.

Special, ... $50
First premium, ... 50
Second premium, ... 30
Third premium, ... 20

ON BUTTER DAIRIES.

The number of cows not less than 20. Hon. R. Denniston, chairman of committee.

First premium, ... $30
Second premium, ... 20
Third premium..... 10

☞ Persons applying for the premiums on Cheese and Butter Dairies, must furnish answers to a series of questions, copies of which can be obtained by addressing B. P. Johnson, Esq., Albany.

PREMIUMS ON CATTLE.

CLASS I.—Durhams.

Best bull, 3 years old, ...	$20	Best cow, 3 years old,.....	$20
Second best,.....	15	Second best,.....	15
Third best, ...	Am. Herd Book.	Third best, ...	Am. Herd Book.
Best 2 years old,.....	15	Best heifer, 2 years,.....	15
Second best,.....	10	Second best,.....	10
Third best, ...	Am. Herd Book.	Third best, ...	Am. Herd Book.
Best year old bull, ...	10	Best year old heifer, ...	10
Second best,.....	5	Second best, ...	5
Third best, ...	Am. Herd Book	Third best, ...	Am. Herd Book.
Best bull calf,.....	5	Best heifer calf,.....	5
2d do.,...	Washington's Letters.	2d do....	Washington's Letters.

CLASS II.—Herefords.

Best bull over 3 years old,..	$20	Best cow, 3 years old,.....	$20
Second best,.....	15	Second best,.....	15
Best bull between 1 and 3 years old,.....	15	Best heifer between 1 and 3,	15
Second best,.....	10	Second do.,.....	10
Best bull calf,.....	5	Best heifer calf,.....	5
Second best, ...	Wash. Letters.	Second best, ...	Wash. Letters.

CLASS III.—Devons.

Best bull, 3 years old,.....	$20	Best cow,.....	$20
Second best,.....	15	Second best,.....	15
Best bull between 1 and 3 years old,.....	15	Best heifer between 1 and 3 years old,.....	15
Second best,.....	10	Second best,.....	10
Best bull calf,.....	5	Best heifer calf,.....	5
Second best,....	Wash. Letters.	Second best,....	Wash. Letters.

CLASS IV.—Ayrshires.

Best bull, over 3 years old, .	$20	Best cow,.....	$20
Second best,.....	15	Second best,.....	15
Best bull between 1 and 3 years old,.....	15	Best heifer between 1 and 3 years old,.....	15
Second best,.....	10	Second best, ...	10
Best bull calf, ...	5	Best heifer calf,.....	5
Second best,....	Wash. Letters.	Second best, ...	Wash. Letters.

CLASS V.—Crosses, Natives, &c.

Best cow, over 3 years old,.	$20	Best yearling heifer,.....	10
Second best,.....	15	Second best, ...	5
Third best,.....	10	Third best,.....	Vol. Trans.
Best 2 year old heifer,.....	15	Best heifer calf,.....	5
Second best,.....	10	2d best heifer calf, .	Wash. Lett.
Third best 2 years old heifer,	$5		

Working Oxen.

Best team of 20 yoke from any one county,.....	$25	Largest No., not less than 10 yoke of oxen from any one town, ...	$20
Second best,.....	15	2d largest,.....	10
Best yoke of oxen,.....	15	3d largest, ...	Col. Tour.
Second best,.....	10		
Third best yoke, ...	Vol. Trans.		

Three Year Old Steers.

Best Yoke, ...	$10	Second best,.....	$8
Third best, ...	Vol. Trans.		

Best team of 10 yoke from any one county, ... $15

To boys, between the ages of 16 and 20, inclusive, who shall exhibit the best broke yoke of 3 year old steers, of their own training, ... Col. Tour.

Second best do., Wash Letters. | Third best. do,..... Vol. Trans.

Two Year Old Steers.

Best yoke,.....	$10	Second best, ...	$5
Third best, ...	Vol. Trans.		

To boys under 16 years of age, who shall exhibit the best broke yoke of 2 year old steers, of their own training,..... Col. Tour.

Second best,.... Wash. Letters. | Third best,..... Vol. Trans.

Yearling Steers.

Best yoke,.....	$8	Second best, ...	$5
Third best, ...	Vol. Trans.		

To boys under 16 years of age, who shall exhibit the best broke yoke of yearling steers of their own training, ... Col. Tour.

Second best,.... Wash. Letters. | Third best, ... Vol. Trans.

In awarding the premiums on working oxen and steers, the single teams will be subjected to a trial on a loaded cart or wagon, under the direction of the committee; and particular reference will be had to the matching, training, and docility of the animals, as well as their general appearance.

FAT CATTLE.

Best pair fat oxen,..... $15 | Second best,..... $10
Third best,... ..... Colman's Tour.
Best ox or steer,..... $10 | Second best,..... $5
Third best,..... Vol. Trans.
Best fat cow or heifer,..... $10 | Second best,..... $5
Third best,..... Vol. Trans.

A fat ox taking a premium as one of a pair, cannot compete singly for another premium.

FAT SHEEP.

Best fat sheep,..... $10 | Second best..... Col. Tour.
Third best, ... Vol. Trans.

Applicants for the premiums on fat cattle and sheep, must furnish statements of the manner of feeding the animals, and the kind, quantity, and cost of the food.

BEST MILCH COW.

The cow to be kept on grass only during the experiment, and for 15 days previous to each period of trial,..... $20

The time of trial, from 10th to 20th of June, and from 1st to 10th of September.

Statement to be furnished, containing

1st. The age and breed of cow, and time of calving.

2d. The quantity of milk in weight, and also of butter, during each period of ten days.

3d. The butter made, to be exhibited with the cow, at Saratoga, and the statement to be verified by the affidavit of competitor, and one other person conversant with the facts.

HORSES.

CLASS I.—FOR ALL WORK.

Best stallion ver 4 y'rs old,. $15 | Third best,.. Youatt, on Horse.
Second best, ...10 | Fourth best,..... Vol. Trans.
Best brood mare, (with foal at her foot,) for all work, ... $15
Second best, ... $10 | Third best,..... Youatt
Fourth best,..... Vol. Transactions.

CLASS II. DRAUGHT.

Best stallion over 4 y'rs old, $15 | Third best,..... Youatt.
Second best,..... 10 | Fourth best,..... Vol. Trans.
Best brood mare, (with foal at her foot,)..... $15
Second best, ... $10 | Third best,..... Youatt.
Fourth best, ... Vol. Trans.

CLASS III.—BLOOD.

Best stallion over 4 y'rs old, $15 | Third best,..... Youatt.
Second best, ... 10 | Fourth best,..... Vol. Trans.
Best brood mare (with foal at her foot,) 15
Second best,..... $10 | Third best,..... Youatt.
Fourth best, ... Vol. Trans.

THREE YEAR OLD STALLIONS.

Best 3 years old stallion,... $10 | Third best, ... Youatt.
Second best..... 5 | Fourth best,..... Vol. Trans.
Best mare 3 years old,..... 10 | Second best,..... ..... $5
Third best, ... Youatt.

GELDINGS AND MATCHED HORSES.

Best Gelding,..... Diploma. | Second best,..... Youatt.
Best pair of matched horses,..... $8 and Diploma.
Second best,..... $5 | Third best, ... Vol. Trans.

SHEEP.

CLASS I.—LONG WOOLED.

Best buck. ..... $10 | Best 5 ewes, ... $10
Second best, ... 5 | Second best,..... 5
Third best, ... Am. Shepherd. | Third best,..... Am. Shepherd.
Best pen 5 lambs,..... $5

CLASS II.—MIDDLE WOOLED.

Best buck,..... $10 | Best 5 ewes, ... $10
Second best, ... 5 | Second best,..... 5
Third best,..... Am. Shepherd. | Third best,..... Am. Shepherd.
Best pen 5 lambs..... $5

This class includes the South Down, Norfolk, Dorset, Native, &c.

CLASS III.—MERINOS AND THEIR GRADES.

Best buck, ... $10 | Best 5 Ewes, ... $10
Second best,..... 5 | Second best,..... 5
Third best,..... Am. Shepherd. | Third best,..... Am. Shepherd.
Best pen 5 lambs,..... $5

This class includes all those generally denominated Merinos, whether of pure or mixed blood.

CLASS IV.—SAXONS AND THEIR GRADES.

Best buck, ... $10 | Best 5 ewes, ... $10
Second best, ... 5 | Second best,..... 5
Third best..... Amer. Shepherd. | Third best,..... Am. Shepherd.
Best pen 5 lambs,..... $5

This class includes all those generally denominated Saxons, whether of pure or mixed blood.

When sheep are presented for premiums unshorn, evidence will be required of the age of the fleece.

SWINE.—LARGE BREED.

Best boar, 2 years old, ... $10 | Best sow, 2 years old,..... $10
" " 1 year old..... 8 | " " 1 year old, ... 8
" " 6 mos. and over,. 5 | " " 6 mos.,..... 5

This includes Cheshire, Berkshire, Russia, Mackay, Leicester, and their grades.

SMALL BREED.

Best boar, 2 years old, ... $10 | Best sow, 2 years old..... $10
" " 1 year old, ... 8 | " " 1 year old, ... 8
" " 6 mos.,..... 5 | " " 6 months,..... 5

This class includes Neapolitan, Suffolk, Improved China, Chinese, Mocko, and their grades.

Best lot of pigs not less than 4 in number, under 10 mos,.... $5
Second best, " " " Vol. Trans.

In awarding premiums on hogs, reference will be had not merely to present condition, but to that proportion between bone and meat which promises the greatest value from the least amount of feed.

POULTRY.

For the best lot of Dorking Fowls, not less than 3, 1 cock and 2 hens,..... $2 and Am. Poulterers' Companion.
Best lot of Black Poland, not less than 3, $2 and Am. P. Comp'n.
Best lot of large fowls, not less than 3,.... 2 "
Best pair of ducks, ... 2 "
Best pair of turkies,..... 2 "
Best pair of geese,..... 2 "
Best and greatest variety of barn-yard fowls owned by the exhibitor,..... $5 and Am. Poulterer's Companion.

PLOWS.

Best plow possessing some new and valuable improvements,..... $10 and Diploma.
Best subsoil plow,..... 10 "
Best scarifier, ... 10 "
Best roller for general use, ... 5 "
Best clod crusher and roller,..... 5 "

WAGGONS, HARROWS, &c.

Best farm wagon, $10 and Dip. | Best Corn Stalk Cut.,$5 and Dip.
Second best,..... Col. Tour. | Second best,..... Trans.
Best Harrow, ... $3 | Best Threshing Ma ,$10 and Dip
Best Cultivator. ..... 3 | Second best, ... Trans.
Best Fanning Mill, $5 and Dip. | Best Drill Barrow, $3 and Dip.
Second best, ... Trans. | Best Straw Cutter, 3 and Dip.
Best Horse Power,. $5 and Dip. | Second best, ... Trans.
Second best,..... Trans.

FARM IMPLEMENTS, &c.

Best Corn and Cob Crusher, by horse power, ...$5 and Dip.
Second best ..... Colman's Tour.
Best Clover Machine,.....$5 and Dip.
Second best, ... Col. Tour.
Best Flax and Hemp Dresser,..... $5 and Dip.
Second best,. ..... Col. Tour.
Best Horse Cart, for farm, ... $3
Best Ox Cart, ... $5
Best Horse Rake,..... $2 and Dip.
Best Ox Yoke,..... Diploma.
Best Farm Harness, ... "
Best Saddle,..... "
Best Grain Cradle,..... "
Best 6 Hand Rakes, ... "
Best 6 Hay Forks,..... "
Best 6 Grass Scythes..... "
Best 6 Cradle " ..... "
Best 6 Dung Forks,..... "
Best 6 Axes, ... "
Best Hay Rigging,..... "
Best lot Grain Measures,..... "
Best lot Butter Tubs and Firkins,..... "
For the best and most numerous collection of Agricultural Implements,.....$10 and Diploma.
Also, for the best and most numerous collection of Agricultural Implements, manufactured in the state of New-York, by or under the supervision of the exhibitor..... $10 and Dip.

PLOWING MATCH.

First premium, ... $15 | Third premium,..... $10
Second " ..... 12 | Fourth do. .....Col. Tour.
Fifth,..... Vol. Transactions.
For boys under eighteen years of age.
First premium,..... $10 | Second premium, ... $5
Third,..... Vol. Transactions.

BUTTER.

For the best lot, (quality as well as quantity considered,) made from 5 cows in 30 successive days,—25 lbs. of the butter to be exhibited..... $25
Second best,..... $15 | Best 50 pounds made at any
Third best,..... $10 | time,..... $15,
Best 25 lbs. made in June... $10 | Second best, ... $10
Second best,..... Col. Tour. | Third best,..... Col. Tour.
Third best,..... Vol. Trans. | Fourth best,..... Sil. Medal.
Fifth best,.....Vol. Trans.

CHEESE.

One year old and over.

Best 100 lbs., ... $15 | Third best,..... Sil. Medal.
Second best, ... 10 | 4th best, ... Wash. Lett.
Fifth do..... ..... Vol. Trans.
Less than one year old.
Best 100 lbs.,..... $15 | Third best..... Sil. Medal.
Second best,..... 10 | Fourth best..... Wash. Letters.
Fifth best,..... Vol. Trans.

(To be concluded next month.)

NEW-YORK STATE AGRICULTURAL SOCIETY.

AT a meeting of the Executive Committee, held at the Society's Rooms, March 11, 1847, there were present—GEORGE VAIL, President; SAMUEL CHEEVER, C. N. BEMENT, Vice-Presidents; J. McD. McINTYRE, Treasurer; B. P. JOHNSON, Rec. Sec'y.

Letters were read from C. Lee, Yates Co.; T. B. Wakeman, Sec'y American Institute; R. Hadfield, Sec'y Erie Co. Ag. Society; Henry Brewer, Tompkins Co., L. F. Allen, Buffalo, with report on Fruit; J. L. Randall, Lysander; E. W. Bateman, late President Cayuga Co. Ag. Soc.; Wm. Ottley, Phelps; A. G. Carl, Secretary Queens Ag. Soc.; J. B. Dill, Auburn; Myron Adams, East Bloomfield, with suggestions as to statements for field crops, &c.; Geo. Geddes, Fairmount, in relation to experiments with Indian corn, to ascertain its value for fattening animals, &c.; A Loo-

mis, Secretary Herkimer Co. Ag. Soc.; Pennock & Pierce, Chester Co., Penn.; H. Mesier, Sec'y Dutchess Co. Soc.; A. L. Fish, Herkimer Co., in relation to the analysis of soils and grasses, and the testing of the qualities of milk of different cows for dairy purposes. [the Sec'y was directed, after consultation with Prof. Emmons, to answer inquiries;] James M. Ellis, Onondaga; H. S. Randall, Vice-President; A. Holmes, Sec'y Niagara County Soc.; Josiah Tatum, Ed. Farmers' Cabinet, Phil'a.; A. Anderson, Sec'y Fulton and Hamilton Co. Soc.; E. C. Frost, Vice-President, expressing his deep interest in the prosperity of the Society, and his regret at being unable to attend the regular meetings of the Board.

The Nos. of Farmers' Cabinet, Philadelphia, for 1846 and 1847, as far as published, were recived from Publisher, and the American Journal of Agriculture and Science, from Proprietor; the thanks of the Board were voted to the donors.

Thomas R. Allen's Bee Cultivator, containing the history and management of the bee, was presented by the author, and the Secretary was directed to furnish Mr. Allen with a certificate: That, in the opinion of the Executive Committee, his treatise contains a large amount of valuable information upon the management of the bee, and that they consider his work deserving of encouragement and extensive circulation.

FRUIT.—The following resolution was adopted for the government of the committees on fruit:

Resolved, That the work entitled "*The Fruits and Fruit Trees of America*," by A. J. DOWNING, be the established authority of the N. Y. S. Ag. Society, in classifying the varieties and nomenclature of fruits at our future exhibitions.

A. J. Downing, of Newburg, J. W. Bissell, of Rochester, were added to the committee on fruit, appointed under the resolution of last year, and continued at the last annual meeting. The other members of the committee are, Lewis F. Allen, of Buffalo, chairman; Hon. Samuel Young, of Saratoga; and Doct. Herman Wendell, of Albany.

The President stated that he had, in company with the Secretary, visited Saratoga Springs, at the request of gentlemen of that place, and had examined various locations proposed for the show grounds for the fair, in September; that several of these were in the highest degree eligible, and that advice had been given to the members of the executive committee there, as to the location which was most desirable.

The Secretary reported the Premium List, as published, and was authorized to procure 250 copies of the same for distribution. The amount of cash premiums, $3,004; 131 volumes of agricultural works; 65 volumes Transactions; 59 diplomas, and 15 silver medals; amounting in all to $3,472.

The Secretary reported that he had received returns from 39 county societies, and that their reports were in many cases, of very great interest, and that all reports received had been prepared for the Transactions. Only 7 societies from which reports had not been received—and that he was in correspondence with the officers of these societies, and expected returns from them all. Only 12 counties in the state in which there are not organized societies.

From these reports it appears that in 19 counties, the yield of Indian Corn exceeds 80 bushels to the acre; in 11 counties, crops are reported exceeding 100 bushels. The largest yield in—

Cortland county, of	.....	154	bushels.
Oswego "	.....	146⅞	"
Orange "	.....	139	"
Tioga "	.....	125	"
Oneida "	.....	123½	"

The largest yield of wheat, is from Ontario, a fraction short of 60 bushels per acre, on upwards of 3 acres.

In eight counties, the yield of oats exceeded 70 bushels per acre. The largest yield, 102 bushels, in Oneida.

A premium of $5 awarded to Jesse Babcock, of Volney, Oswego county, on barley, 54 bush 8 lbs. per acre.

To Henry Brewer, of Enfield, Tompkins county, a premium of $10, for best two acres of clover seed, 5½ bush. per acre.

Satisfactory reasons were given to the committee as to the delay attending the production of the papers in the above cases at the annual meeting.

A letter was read from L. T. Marshall, Cor. Sec'y of the Vernon Town Agricultural Association of Oneida county, giving an account of the organization of the association, in December, 1845, and of its progress during the year. A Fair was held in the fall of 1846, which excited much attention, and was judged worthy to be compared with the county exhibitions. The association continue their organization, and from the interest manifested, they hope it will not only increase, but that its usefulness will be more widely extended. A committee consisting of the Hon. Pomeroy Jones, Salmon Case, Hon. Timothy Jenkins, and Fitch Howes, made an interesting report, extracts from which the secretary was directed to insert in the Transactions. The following resolution was adopted:

Resolved, That we deem the establishment of agricultural town associations of much importance to the advancement of the agricultural interests of the state, and that from them the farmers and others may der ve much valuable and practical information, and that we believe they are well adapted to infuse a new spirit among our farmers, and will, when properly conducted and suitably sustained, prove valuable auxiliaries to the county and state organizations.

B. P. JOHNSON, Sec'y.

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VERMONT.

We have received the Prize List of the *Washington Co.* Ag. Society for this year, amounting to $500. The Fair is to be held at Montpelier, on the first of October next.

Officers of the Society for 1847.—Daniel Baldwin, Montpelier, *Pres't*; Orson Skinner, and Jacob Scott, *V. Pres'ts*; J. W. Howes, Montpelier, *Secretary*; E. P. Walton, *Treas.*

NEW-YORK COUNTY SOCIETIES.

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CAYUGA.—The annual meeting of the Ag. Society for this County, was held at Auburn, on the 13th Feb., when Chester Gridley, of Sennett, was chosen *President*; B. F. Hall, *Rec.*, and J. B. Dill, *Cor. Sec'y*; J. C. Derby, *Treas.* A Vice-President and a member of the Executive Committee, were also appointed for each town in the county. The Treasurer reported a balance of $167.87 in his hands.

CLINTON.—At the annual meeting of the Ag. Society for this county, the following officers were elected for this year: Thomas Crook, Plattsburgh, *President*; Wm. Hedding, of Chazy, S. H. Knappen, of Beekmantown, Wm. Keese, Ausable, and N. Moore, of Champlain, *V. Presidents*; Edwin Benedict, Willets Keese, G. V. Edwards, R. O. Barber, and C. L. Hager, *Ex. Com.*; Jona. Battey, Ausable, *Cor.* and J. W. Bailey, Plattsburgh, *Rec. Sec'y*; Peter Keese, Peru, *Treas.* Premiums were awarded on Field Crops as follows:

Indian Corn.—1. To John Keese, 104 bu. per acre—2. S. H. Knappen, 83 bu. 14 qts.—3. Z. C. Platt, 41 bu. corn, and 18½ bu. beans.

Winter Wheat.—1 To John Keese, 30 bu. per acre—2. S. H. Knappen, 24 bu —3. C. L. Hager, 21 bu.

Peas.—1. To C. L. Hager, 43¾ bu. per acre—2. S. H. Knappen, 24 bu.

Beans.—To S. H. Knappen, 30½ bu. per acre.

Potatoes.—1. To Wm. Keese, 220 bu. per acre.

Premiums were awarded to J. W. Bailey, 239 1-4 bu. *carrots* on one-fourth of an acre, and 569 bu. *Beets* on half an acre. A premium was also awarded to Mr. Bailey, for the best Essay on the Culture of Fruit, which is published in the Society's Transactions.

ONTARIO.—At the winter meeting of the Executive Committee of this Society, the following premiums were awarded:

To Daniel Short, of Richmond, for the best acre of *Winter Wheat*, $10; he having raised 59 86-100 bushels per acre, on 3 1-60 acres; in the whole 180 bushels.

To Whiting D. Stanley, of Canandaigua, for the best acre of *Indian Corn*, $7.00; he having raised 89 62-75 bushels to the acre, (75 lbs. of *ears* of corn allowed as the weight of a bushel.)

To Calvin Pomeroy, of East Bloomfield, for the best acre of *Barley*, $5.00; he having raised 57 bushels to the acre, on 2 58-100 acres.

To Thomas H. Kellogg, of East Bloomfield, for the 2d best acre of *Barley*, $3; he having raised 55 1-10 bushels to the acre, on 2 acres, 11-160 rods.

Stephen B. Dudley, of East Bloomfield, for the best 3 acres of *Barley*, the premium of a Vol of Trans. of the State Society; he having raised 51⅓ bush. to the acre.

To William R. Pettit, of Gorham, for the best ¼ acre of *White Beans*, $3; he having raised on 134 rods of land, 34 bu. and 11 quarts.

Geo. W. Bemis, was appointed Treasurer of Society, to fill the vacancy occasioned by the removal of Nicholas G. Cheesbro from the state.

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BROOK AND OHIO CO. (VA.) AGRICULTURAL SOCIETY.—We have received a number of the *Wheeling Times*, containing an account of the exhibition of this society, which was held at West Liberty, on the 8th of October last. There appears to have been a fine show of animals of various kinds, particularly of fine-wooled sheep. The principal successful competitors in this department, were Dr. Chaplin, Jesse Edgington, John Atkinson, Z. S. Mitchell, Basil Bell. Talbot Hammond, of Brooke County, received the premium for the best cultivated farm; and Wm. Boggs for the best orchard.

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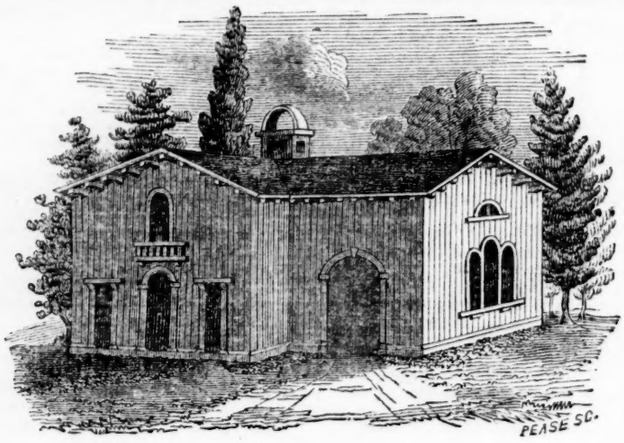
The Middlesex Co. (*Mass.*) Cattle Show and Plowing Match, for this year, will be held at Concord, on the 6th Oct. The Prize List, amounts to about $800, the greater part of which, we are pleased to see, is for details of experiments in practical husbandry, the results of which can hardly fail to be of great value to every reading and reflecting farmer.

DRAINING.—H. Colman, speaking of the evils of *stagnant* water in the soil beneath the surface, says: "plants produced on a very wet soil, are unpalatable, innutitrious, and insubstantial. Animals fed upon them always lose condition, and the manure of animals so fed is almost worthless. I saw this strikingly illustrated in the magnificent pork of the Duke of Bedford, at Woburn Abbey. Here there were many spots where the grass was luxuriant and abundant, on account of their excessive dampness, and which were entirely neglected both by the sheep and the deer; but wherever these places, once wet, had been thoroughly drained, they became the favorite resorts of these animals, and were fed as closely as possible."

RAISING NUTS.—It is said that grafting the shagbark hickory renders it a better and more uniform bearer. English walnuts are very productive in some parts of the country—near New York is a tree which is said to have produced in one year a crop selling for $200.



ORNAMENTAL CARRIAGE HOUSE AND HORSE BARN.

We often notice, in works on Landscape Gardening, directions for concealing from view by trees, the barns and other out-buildings of the farm, with the evident understanding that they are and must be unsightly objects. We believe these directions to be founded in error, because among the most important comforts and conveniences of a country establishment, are good and commodious out-buildings. Indeed, they may in some degree be regarded as forming a union between the dwelling and the farm, in a manner somewhat similar to that by which a union between the house and ornamental grounds is maintained by means of architectural embellishments. At all events, a total absence of farm buildings would not be a pleasing sight on a fine and well cultivated farm, which should be conspicuous for all the comforts of home. Hence the true course, is obviously to improve those buildings, so that, at least partly visible through trees, they may add to, instead of defacing the scenery.

With the object of calling attention to the architecture of barns, we give a plan and view of a carriage house and horse barn, about to be erected by a gentleman in the western part of the state. It is to be built in the Italian style, and will need only a small expenditure for the completion of all its parts, above what is usually needed for buildings of this kind. In the plan it will be seen, that one part is for carriages, and the other a stable for horses, with several closets for oats, harness, saddles, whips, curry-combs, carriage grease, &c. A part of these may be omitted, and more room left for carriages.

The perspective view will be understood without much explanation. The part exibited is to face the dwelling, or the more frequented part; the back is mostly hid by trees. There are two false doors on the stable part, to add to the appearance, the actual entrance being near the corner. The chimney ventilator is an essential part. It should be remarked, that the brackets, door frames, projecting eaves, &c., should all be made substantially, of two or three inch plank.

In the plan, *A* is the room for carriages, *B* for horses, there being four stalls, the mangers *C C* containing two upright semi-circular racks for hay. The passage *D*, for feeding horses, is three feet wide, and *E*, three and a half. *F* is the entrance door to the stable, and *G* the manure door. The carriage-house doors *H*, *H*, are each 8 feet wide, consisting each of two four feet wide doors. The height, 15 feet, leaves a spacious chamber for hay, the larger entrance to which is nearly over the manure door, *G*, and not shown in the view.

The cost will vary with the mode of finish, and the price of materials in different localities. Such a building may be cheaply constructed of rough plank, (previously sawed of a uniform width,) placed perpendicularly, and battened on the joints, and colored by a wash of lime applied with a brush. This wash should be of a grey, or fawn color, or a medium between the two, made by adding portions of yellow ochre, Venetian red, and lamp-black, to common lime whitewash, and also dissolving in it a small quantity of salt and alum, to promote more perfect adhesion. A new coat should be given every year or two. The window and door frames should be planed and painted. A better finish would be rough inch and a quarter or inch and a half plank, matched at the edges, and battened as before on the joints, and protected from the weather by oil paint, colored as just described, and applied to the rough surface. Such a surface, though needing considerable paint at first, will retain it remarkably, and need less afterwards. A still higher finish, requiring more costly stuff for siding, and increasing the carpenter's bill, is to plane the whole surface, and cover it with three coats of oil paint. T.

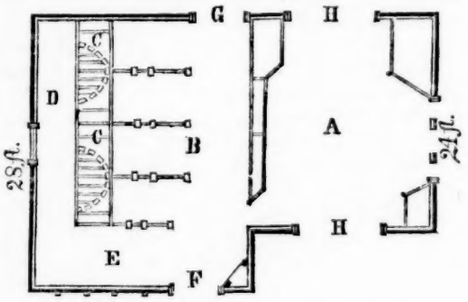
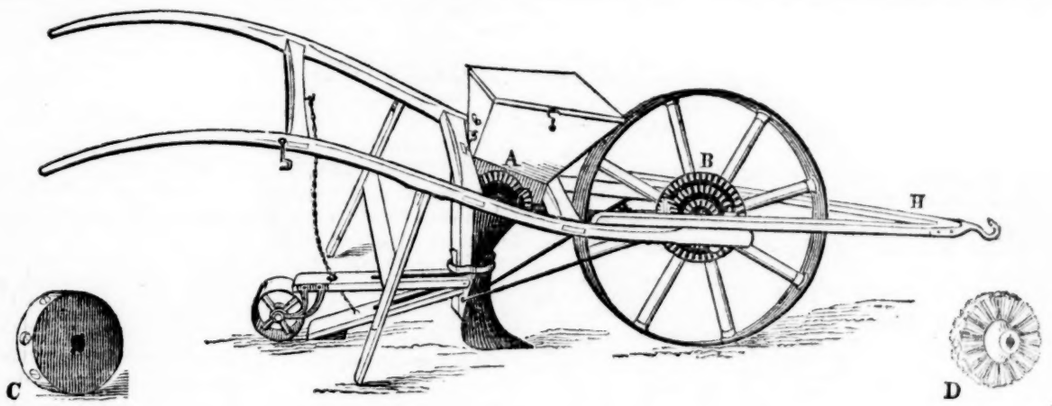


Fig. 16.

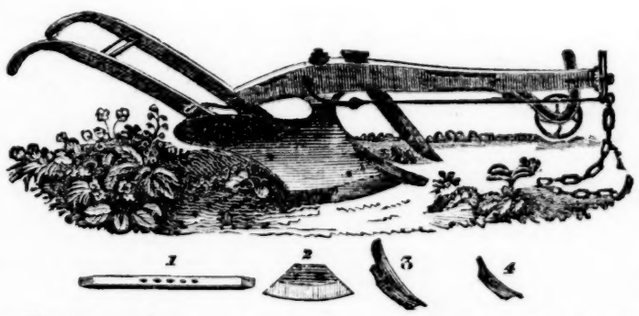
The Paulownia.—This new tree, it is well known, grows with extraordinary rapidity when young. A writer in the London Gardeners' Chronicle, says, that in England, the young shoots which from their rapid and spongy growth, do not harden well, are killed at the extremities. He adds, "the original tree at Paris, which first flowered there, is thirty feet high, the branches about twenty feet in diameter, with a clean stem three feet in circumference, (one foot in diameter.) The leaves now, upon this tree, are about the size of those of the Catalpa, and the shoots scarcely exceeding a foot in length, which of course ripen perfectly."



ALBANY SEED DRILL AND CORN PLANTER.

THE above cut represents the latest improved Drill Barrow, with attachment H, for a horse, for planting corn, beans, &c., &c. This is, in its general features, similar to the well known English Drill or Brush Barrow. It is light, strong, and durable; can be used by one man, as its whole weight will not exceed fifty pounds, or can be drawn by a horse, when a large amount of work is to be done. It is also quite simple; the small seeds, as onions, carrots, parsneps, turneps, &c., are sown by a revolving brush, D, inside the hopper, and which forces the seeds through a hole in a tin slide or plate, at the bottom of the hopper,—the holes in the slides, varying in size according to the size and quantity of seed to be sown. For corn, beans, peas, &c., the brush and tin slide, or plate, are removed, and a wood cylinder, C, substituted, with eight cavities in the same, equal distances apart, and in each cavity is a screw with a large head, which can be turned out or in to receive the requisite number of grains of seed to be sown in each hill. One or all these cavities may be used at the same time, according to the distance between the hills. The brush and cylinder both receive their rotary motion from the large or forward wheel, B, by means of small gear wheels, one of which, at B, is movable on the connecting rod from A to B, and can be confined so as to operate in any of the different rows or series of cogs in the face of the large wheel, and thereby receive a greater or less number of revolutions to the ground over which it moves, consequently varying the distance of the hills with the cylinder, from 3 to 6, 9, 12, 24, 36, 48, or 96 inches asunder. The plow can be placed up or down, to any required depth, or to suit tall or short persons holding the same; the scraper and roller follow and cover the seed, and compress the earth at one operation. Price complete, $12, and warranted; manufactured by H. L. Emery, and for sale at the Albany Agricultural Warehouse and Seed Store, Nos. 10 and 12 Green-street.

EAGLE SELF-SHARPENING PLOW.



THE general form and construction of this plow is similar to that of the celebrated Eagle plow, manufactured by the same company, Messrs. RUGGLES, NOURSE & MASON, Worcester, Massachusetts. There are five sizes of this plow, the smallest of which is adapted to one horse, and the largest to the plowing of greensward.

The point, as shown at fig. 1, in the above cut, is simply a bar of wrought iron, *steeled* at each end, about twenty inches long, and passes upward into the body of the plow, where it is confined by a bolt. As it becomes shorter, and worn on the under side, it is readily moved forward and turned the other side up, thus always presenting a sharp point of full length and proper shape. When one end is worn off five inches, the other end is placed forward and performs a like service. The wing or share, as shown detached, at fig. 2, is made of either wrought iron with steel edge, or of cast iron, and is also reversable, being used either end forward, or either side up. Both point and share are so simply constructed that any blacksmith can replace them at trifling expense, or continue the use of the original by new-laying with steel, as they become worn. There is a coulter of cast-iron a little back and above the point, shown detached at fig. 3, forming part of a cap, shown detached at fig. 4, which cap protects the shin or forward part of the mould board; it is confined in its place by the same bolt that confines the point, and is cheaply replaced when worn. This is much less expensive, and in many kinds of soil is quite as serviceable as a wrought iron coulter or cutter. The plows are sold with a cutter in addition to the cap, or without the cutter, as is desired.

This plow is particularly recommended for southern plantations, where the blacksmiths on the estates can easily repair them. We think it a plow well deserving the attention of farmers.

THE FARMER'S NOTE BOOK.

TIME NECESSARY FOR MATURING FIELD CROPS.—The annexed table, compiled from my "Farm Book," you are at liberty to publish if you should deem it worthy. E. V. W. DOX. *Lafayette, Onondaga Co., N. Y., Jan.* 18, 1847.

Time when sown.	Grain.	When Harvested.	Time required to mature.	
			Months.	Days.
1838, May 1	Barley,	Aug. 8	3	7
" 2	Spring Wheat,	" 13	3	11
" 14	Peas,	Sept. 7	3	23
" 19	Oats,	Aug. 31	3	12
" "	Corn,	Sept. 20	4	1
" 22	Potatoes,	" "	3	28
Sept. 10	Winter Wheat,	Aug. 6	10	26
1839, Apl. 16	Oats,	" 19	4	3
" 20	Peas,	" 30	4	10
" 22	Spring Wheat,	" 20	3	28
May 18	Corn,	Sept. 28	4	10
" 20	Potatoes,	Oct. 2	4	12
June 13	Oats,	Sept. 19	3	6
April 16	Barley,	Aug. 17	4	1
Sept. 14	Winter Wheat,	" 7	10	21
1840, May 13	Peas,	Sept. 5	3	22
" "	Barley,	Aug. 8	2	25
" 16	Oats,	" 20	3	7
" 27	Potatoes,	Sept. 24	3	27
Sept. 8	Winter Wheat,	Aug. 5	10	27
1841, May 8	Barley,	" 14	3	6
" "	Peas,	" 25	3	17
" 15	Oats,	" 20	3	5
" 31	Corn,	Sept. 23	3	23
" "	Potatoes,	" "	"	"
Sept. 15	Winter Wheat,	Aug. 8	10	23
1842, Apl. 23	Barley,	" 13	3	20
" "	Peas,	" 29	4	6
May 11	Corn,	Sept. 24	4	13
" 13	Potatoes,	" 29	4	16
Sept. 27	Winter Wheat,	Aug. 7	10	10
1843, May 5	Barley,	" 11	3	6
" 10	Peas,	Sept. 1	3	21
" 18	Potatoes,	Oct. 17	4	59
Aug. 31	Winter Wheat,	July 15	10	14
1844, Apl. 16	Peas,	Aug. 19	4	3
" "	Spring Wheat,	" 8	3	22
May 3	Potatoes,	Sept. 18	4	15
" 13	Corn,	" 26	4	13
Sept. 4	Winter Wheat,	July 31	10	27
1845, Apl. 30	Peas,	Aug. 20	3	20
May 1	Potatoes,	Sept. 30	4	29
Apl. 30	Oats,	Aug. 20	3	20
May 9	Corn,	Sept. 22	4	13
Sept. 10	Winter Wheat,	Aug. 4	10	24
1846, Apl. 27	Peas,	" 22	3	25
May 7	Potatoes,	Sept. 3	3	26
" 22	Corn,	" 22	4	0
" 30	Oats,	Aug. 31	3	1

TRAINING DOMESTIC ANIMALS.—"Train up a child in the way he should go,"—"just as the twig is bent, the tree is inclined," are remarks no more applicable to their different subjects, than they are essential to the management of the brute creation. The earlier proper training is given the child, the less difficulty will be found in leading him the right way; the sooner the twig receives the desirable inclination, the more natural and thrifty will be its growth in the wished for direction; so too, the earlier we commence training the animals of the farm for the purposes to which we design to appropriate them, the *more willingly* and *naturally* they will fulfil those purposes.

Hence we may suppose, that the sooner young stock are made *gentle*, by being accustomed to the stable, where every process of kindness is calculated to subdue the turbulence of their natures, the more affable will be their disposition, and the better they will be calculated fully to subserve our purpose. We have seen calves which were habitually tied in the stall through the winter, which ever after exhibited the gentleness of oxen. They soon learned their places, and would go to them as regularly as a company of disciplined men would go to their service, at their required time. We have seen such calves submitted to the yoke, and taught all the rudiments of ox education, such as drawing light loads, backing, &c., &c., &c. And when these calves have attained the estate of oxen, we have seen them highly commended for their power of strength and amiableness of disposition. We have sometimes, it is true, heard it remarked, that this process of early breaking and gentling steers was foolish and injurious—calculated to retard their growth and make them feeble—that they should not be broke until two or three years old, when their strength and size were more fully developed. We would not put them to hard labor to tax them to the extent of their strength until that period, nor then either. But we feel a full assurance that the earlier they are put to a moderate trial of their powers, the firmer will be the strength of bone, and the better they will be calculated to endure hardship in mature years, than though they had not submitted to training in early life. With the process of breaking, to being tied in the stable, and manoeuvred in the yoke, should be added that of leading. This, however, should not be confined to steers, but the whole stock should submit to it. It is a gentling process, valuable in its effects and lasting in its consequences. It teaches the animal in the morning of its existence, ere yet its strength leads to obstinacy, that man is its superior, and that its movements must be directed by his will,—a lesson once learned, never to be forgotten. The *convenience* of having cattle thus broke to lead, must be obvious to every farmer. How often it becomes necessary in the course of the season, to take a single creature from the herd, and remove them some distance? Every farmer must know the general tendency of cattle at such times, if they are turned loose. They will run, if a gap or gate is open they are sure to enter and take a hasty survey of the premises, or if a corner where the road branches off is to be passed, they are almost as certain to take the wrong one. Then, the boy must run, clamber over fences or stumble across stone walls, until as much time and strength are consumed as would have been necessary to break the animal to lead, at the proper age. But this is not all; the boy becomes vexed in spirit, perhaps in his anger uses harsh words, and it may be, adopts harsh means to punish the recreant, that did not know but one road would do as well as the other. Maiming or injuring may be the result, which must diminish the value of the beast. At any rate the poor animal gets no less than a fright, which leads her to look upon all such drivers with abhorrence; all which might have been remedied by a little time spent in learning the animal when a calf, to lead, and by inculcating a few lessons of *kindness*, when its susceptibilities to education were first awakening.

But there is an additional benefit in gentling and educating animals when young, which is of untold importance to them and their owner. When disease or accident befal them, at any age, and it becomes necessary for the merciful man to show extended care to his beast, its gentleness and familiarity with his kind usage are realized in a noble extent. We once saw a noble steer that had been subject to many a petting playspell. so severely choked, that the prospect for his relief seemed faint indeed, and had he been a wild, obstinate animal, he would probably have been lost. But under the influence of kind treatment to which he had been subject. he was "quiet as a lamb," while the dangerous operation was performed, that removed the obstacle, and

when relief was fairly given and danger past, and he was let loose, he looked around upon his benefactors with an expression of gratitude that would have denoted nobility of soul in the most exalted of our own species. W. Bacon. *Richmond, Mass.*, 1847.

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M. Guenon's Treatise on Milch Cows—Ayrshire & Devon Cows.—I have read Guenon's Treatise upon milch cows, and have been a pretty close observer of the marks which he considers indicative of their value for milk. I do not believe the criterion given by him to be infallible. I have known some excellent cows for milk, where there was no development of what he calls the "escutcheon." In the region of their milk vessels, there were none of those marks and lines which are formed by the different and opposite directions in which the hair runs. One of the best Ayrshire cows imported by the Massachusetts Society for Promoting Agriculture, one that yields a great quantity of very rich milk, and if allowed, would give milk to the time of her calving, does not exhibit the slightest trace of the "escutcheon." The hair about the milk vessel all running in the same direction, no marks or lines are formed to constitute the escutcheon. The same appearance I have noticed in some other cows of unquestionably good milking properties. If, then, there are some cows which yield large quantities of milk, and which exhibit none of those marks in the region of the milk vessels, M. Guenon's rule of judging of the value of a cow, cannot be of universal application.

But I must allow that when these marks are developed, the form and size of the escutcheon, formed by them, is a pretty sure indication of the quantity and durable yield of the cow's milk. I can understand why a well formed udder, a large milk vein, and a capacious abdomen, accompanied by a soft and yellow skin, should be considered as indications of valuable properties in a milch cow; but why these marks which are formed, as above stated, by the hair running in different and opposite directions about the milk vessel, should be a sure indication of the quantity of milk the cow will yield, any more than the marks and lines which are produced by the same cause in other parts of the body, I cannot explain nor understand. I am willing, however, to confess, that when these marks do exist, they furnish a very sure guide in judging of the value of cows, and though I would not consign a calf to the butcher merely because it did not exhibit these marks, when I knew that the stock from which it descended was good, yet without the knowledge of this fact, I am willing to say that I should from these marks derive much aid, and be greatly influenced in my selection of young heifers that it would be desirable to rear. In this consists the chief value of M. Guenon's theory. Most people can judge of the milking properties of a cow that has arrived at maturity, by other and *more decisive* marks than those pointed out by him; but as these marks are as fully developed in the calf of ten days old, as in the cow of maturer years, the farmer may, by observing them, decide with more certainty of success, as to which of his calves will be most likely to contribute to the value of his dairy stock.

Upon the whole, then, I would say, that as far as my observation has extended, there are very good cows which exhibit none of the marks and lines which M. Guenon calls the escutcheon, the hair of these cows about the milk vessel all running in the same direction; but where these marks and lines are plainly seen, his theory as to the size and form of the "escutcheon" is correct, and furnishes a pretty sure indication as to the value of the cow.

You ask my opinion as to the stock imported by the Massachusetts Society. I had long known the character of the Ayrshire stock for dairy purposes, having for some years kept some of this stock owned by the Society. The Scotch farmers in and about Ayrshire, have been striving for more than half a century to produce a stock in which regard was had almost solely to their value for the dairy; and there is not perhaps in Europe, nor in the world, a race of cows that will secrete more and better milk from a given quantity of food, that are so hardy, so easily kept, that will fatten so kindly when off their milk, as the Ayrshire. The specimen of this stock, four cows and a bull, imported in October, 1845, were selected by an agent sent out for the purpose, who had lived in Ayrshire, and was familiar with all the best herds of cows in that country. As milkers they have fully sustained the high character which was entertained of that stock. The North Devon cows were selected from the celebrated stock of the Earl of Leicester, and the bull was purchased of Mr. Bloomfield, and are all fine specimens of that beautiful breed of cattle. They are not so deep milkers as the Ayrshire, but for all the purposes of the New-England farmer, are perhaps quite as valuable. We have now ten calves from the last importation of cows, eight of which are bull calves. The North Devon bull "Bloomfield," is very much in the same condition as when you saw him. He was attacked some months since with bronchitis, under which he still labors, and from which he will probably not recover. This is the more to be regretted as the specimens of his stock which we how have are very fine, and one whose pedigree is so good, could hardly be obtained in England. E. Phinney. *Lexington, Mass.*, 1847.

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Advantage of Economy in Various Matters.—I have thought it might not be amiss to say something in reference to the great waste of coarse fodder in the grain-growing districts of our country; together with some other matters of smaller moment, relating to the economy of time and labor. I suppose farmers that most need hints on such subjects, do not generally read the Cultivator, or any other paper devoted to agriculture; yet by refreshing the memories of those that do, good may be done, and the light of well established facts, not only revived, but disseminated.

Corn fodder, by long exposure in the field, loses one-half of its nutritive qualities, and by housing or stacking in a damp state, and feeding in an improvident way, the one-half of what remains is also lost. Corn should be cut up by the ground, as far as practicable, before we have severe frosts; and it will pay tenfold for extra care and labor, in securely housing in a dry state. A light feed of cut corn fodder, well cured, night and morning, in a clean, warm stable, with straw fed in boxes, through the day, will keep cattle through the winter in as good condition as they are in at the commencement.

Buckwheat straw, when well cured and housed, is but little inferior to hay; and the chaff is eaten by cattle or sheep with little less eagerness than oats; the chaff of fifty bushels of oats, is worth one feed of hay for four hundred sheep; and corn cobs ground with a small portion of hard grain makes good feed for cattle or sheep.

Much is lost by uncomfortable exposure of stock to cold and storms. By carefully saving and economically feeding all coarse fodder, I have no doubt one-fourth more stock may be well wintered, in any of the grain-growing districts of this state, than is at present poorly wintered, in the usual wasteful way of saving and feeding.

There is a great want of economy in *door fastenings* for out-buildings, mostly in the time it takes to open and shut them. I find none so convenient and durable as good wooden ones, the catch so constructed as to let the latch slide easily over it, and the latch heavy enough to fall easily into the catch.

There is also great waste of time in *branding or marking sheep*, to say nothing of the trouble it gives the

manufacturer to clip the tar off from one or more large letters. The proper place to brand is on the top of the rump; that the mark may be seen from any position the sheep may chance to be in, and that it may not be obliterated by their crowding together. The size of the letter need not exceed two inches in length, and should be put on without handling the sheep at all. The tar should be in a shallow vessel with a handle; the sheep should be in a close pen, (easily made with feeding boxes,) when they may be branded and counted in a very short time, without laying hands on them.

In cutting fodder, I have used for several years an additional hopper to my cutting box, one end narrow enough to rest on the bottom board of the machine box, the other to be from two to three feet wide, according to the length, which may vary to accommodate location. The broad end to rest on a saw horse with legs of sufficient length to elevate it some six or eight inches higher than the machine box; but latterly as I have no occasion for moving my machine, I have built a platform to come on the back side as far forward as the knives, extending back about six feet, and about four feet wide, with the back end elevated so as to allow whatever we are cutting to slide towards the knives. With such a fixture, you may place a large quantity within your reach, and one man can cut about as fast as two men can with nothing but the hopper attached to the machine. DANIEL S. CURTIS. *Canaan Centre, Jan. 4th*, 1847.

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INDIAN CORN AT THE NORTH.—As I uniformly obtain from 65 to 80 bushels of corn per acre, without having it "cost as much as it comes to," permit me to offer a few hints on its cultivation.

Whoever would be highly successful in growing Indian corn in a climate like that of New-York or New-England, must give it such soil, situation, and treatment, as will induce a vigorous, and rapid growth from the time of planting until the grain is perfected.

Young plants, like young animals, in order to grow rapidly, should not only have an abundant supply of food, but food suited to their age; hence the practice of applying a portion of well rotted manure or compost directly to the hill at the time of planting, having previously plowed under a quantity of long or unfermented manure spread broadcast. The amount of manure needed for an acre depends in a great measure upon the state of the soil, but it is always desirable to have the land in such a state as not to require more than 25 ox-cart loads to the acre, exclusive of that applied to the hill. The quantity of fine manure or compost applied to the hill, should vary according to the materials used and wants of the soil, from half a shovel full to a single handful.

As among the best materials known for this purpose, may be named well rotted manure from the barn-yard or hog-pen, together with night-soil, domestic guano, ashes, and plaster; the proportion of each will depend in a great measure upon the nature of the soil cultivated; it is impossible to give any arbitrary rule that will suit every location, but it may be observed however, that the more powerful and highly concentrated the mixture, the more care necessary in applying it, and a less quantity should be used.

Much judgment is requisite in preparing the land for planting. Some of the poorest as well as some of the best crops that have ever been raised, have been grown on green sward plowed but once. While one farmer selects a brittle, friable sod, which he turns in angular furrows, not too deep, at the same time using a subsoil plow if necessary, and has a first rate crop, another (who, by the way, does not read the Cultivator,) selects a damp, tenacious soil, and although he applies a liberal quantity of manure, buries it 7 or 8 inches deep under a flat dead furrow, and the result proves him to be about as successful as was the crow in the fable, which attempted to imitate the eagle by carrying off a lamb. The corn derives little or no benefit from the manure under such circumstances.

The kind of corn I cultivate, is a yellow, eight-rowed variety, of medium size, with small stalks, and although such a variety would no doubt produce more by being planted in drills, yet it is found best, on the whole, to plant in hills, not to exceed two feet apart; making rows only one way; the rows three feet apart; and at this distance and with this variety, three stalks may be allowed to remain in each hill.

The seed is prepared for planting by being soaked about twelve hours, and then rolled in plaster. The steep for soaking the corn is made wholly with reference to forwarding its growth, and *not* for keeping off crows; the boys are allowed the pleasure of doing that. The rolling the seed in tar, and the like substances, often proves an injury to it, and although the crows may not eat the corn thus treated, they frequently pull it up and leave it on the surface which is quite provoking.

As soon as the corn is up so that the rows may be plainly discerned; let a well constructed harrow, with fine sharp teeth, be passed through, taking care to rectify any hills that may be disturbed; after this use such implements as the nature of the soil may seem to demand, the object being to keep the earth loose and free from weeds. It may also be necessary to give the hills a *slight* earthing with the hand-hoe, twice during the season.

The next thing claiming attention, is the selecting of seed for the following year, which should be done by an experienced hand, as soon as the earliest ears have ripened; and as like produces like, select such ears as you would wish the whole crop to resemble, and in a few years it will in a great measure do so.

By pursuing this course, (if you have a variety suited to the location,) there will be no danger of its "*running out*" or "degenerating;" and I am warranted in saying this, from the fact, that the same corn has been continued on the farm I cultivate for forty-five years. LITTLE FARMER. *Otsego Co., N. Y.*, 1847.

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GREEN WOOD VS. DRY.—Mr. THOMAS. in his contributions to the editorial department of your January number, has made some calculations designed to show the comparative value of green and dry wood for fuel. His calculations are based on the supposition that *every cord of green wood contains "more than six barrels of water;"* and that the heat necessary to boil and evaporate these six barrels of water, or more, which, he says, might be made "available," by burning dry wood, is lost, wasted, and made *unavailable*, when green wood is burned; and hence arrives at the conclusion that the farmer who burns twenty cords of green wood in a winter, as, he says, many do, "also performs the *needless task* of evaporating sixty barrels* of water, which," he calculates, "is equal to heating to the boiling point no less than six hundred barrels," &c. If there is "any mistake or error in these calculations," he requests they may be pointed out. This is the object of the present communication.

That there is a difference in favor of dry wood on the score of comfort and convenience, no one who has experienced the comforts and convenience of a wood-house. well stored with dry wood, will be disposed to deny. But it will be hard to convince a great many *farmers* that the difference in point of economy is any where near so great as the calculations of this writer would represent; especially where it is used in an open fire-place.

He says "In the consumption of *every cord of green wood*, six barrels of water are made to boil, the heat of

* This mistake may have been in the manuscript, or have originated with the printer—it should be one hundred and twenty barrels. T.

the wood passing into the water, instead of being *liberated*, and becoming *available*, as would be the case if the wood was dry, and no water to heat."

In the first place, the assumption that "*every cord of green wood*" contains "*six barrels* of water," borders a little too close on the marvelous to be readily comprehended and swallowed by some of our old fashioned farmers, who have more common sense than arithmetic. But admitting the assumption to be correct, it is by no means a necessary consequence "that the other calculations follow as a matter of course." For if, as he says, six barrels of water are to be heated, and evaporated, while burning one cord of green wood, the heat necessary to boil and evaporate this quantity of water, is just as "available" in heating a room, as the same quantity of heat would be emanating from dry wood, or any other combustible substance. The same fire that heats and evaporates the water, heats the air also; and it is an error to suppose that any part of this heat is wasted and lost, any more than heat would be in the same situation, caused by the combustion of dry wood, or any other kind of fuel. And the green wood certainly has the advantage of being more permanent and lasting. It is not necessary, nor does it follow as a "matter of course," that *all* the water and moisture contained in wood, should be expelled to make it fit for the fire, and the most valuable for fuel. Under most circumstances, wood that is suddenly about half seasoned, is worth the most for fuel. Take, for example, a stick of green wood and put it into a heated oven, or expose it to the blaze of a hot fire, till it is a little scorched, or to the heat of the mid-summer sun; let it remain in either of those positions until one-half of the moisture is expelled, and it will be better and worth more for fuel than either green or thoroughly seasoned dry wood. If it could be done, it would be far better that wood should be seasoned in *two hours* than in *two years*, as this writer recommends; because the quicker the expulsion of the sap and moisture is effected, the harder and more compact will be the wood; and fire is a good agent to effect it. Acting from this principle, the back-woodsman heats his maul in hot embers, or in the blaze of a hot fire, to expel the moisture, and make it hard and durable. And on this principle the heat that drives the water from the wood, at the same time hardens it, and from this cause it is longer in being consumed, even after the water is thus expelled, than would be the same quantity, after having been subjected to the slow process of a two years' seasoning.

I think that Mr. Thomas, in making the above calculations, multiplied the consideration of comfort by too large a factor, thus making it overbalance that of dollars and cents;—an error he was more careful to avoid in his subsequent calculations. J. Townsend. *Zanesville, O., Feb.* 5th, 1847.

Remarks.—On reading the preceding communication, from our esteemed correspondent carefully over, there does not appear to be anything in it that invalidates the correctness of the calculations referred to.

The calculations were not based on the "supposition" merely, but on the undoubted *fact*, that every cord of green wood contains six barrels of water, the experiments to prove which were carefully tried by accurate weighing, by the writer of these remarks; hence, he spoke from actual knowledge, and not from "supposition." Other experiments may vary slightly, but not materially, the given result. In opposition to these actual experiments, it will be observed that our correspondent brings only the mere assertion, that it "borders a little too close on the marvelous, to be readily comprehended or swallowed," &c. Why could he not have tried the experiment himself, by drying the wood in a warm room, instead of opposing the mere prejudice or opinion of "old fashioned farmers," to actual fact and correct calculation? Why does he not *show* the error of this calculation, instead of merely condemning it in so summary a manner? Why does he adduce the fact that many farmers are "hard to convince," as a proof that such farmers are necessarily correct?

He brings his mere isolated assertion to controvert the fact, that the heat which passes into water and becomes latent, and ascends in this latent state up the stove-pipe or chimney, also at the same time cannot pass into the room and heat it. Can it be possible that he holds the opinion that any given quantity of heat may be in two places at once? That is, that it may, at one and the same time, be passing into the water of the green wood to heat and evaporate it, and into the air of the room to heat that also? When the heat of a fire is thus divided, a part at least must be lost; and that loss must be greater as the water in the wood is greater. It is indeed true, that the same *fire* or blazing mass of fuel, which heats the room, also heats the water which passes up the chimney; but the same *portion* of heat from that fire, does not go both ways at once.

He brings his mere assertions, unconnected with any substantial reason or argument, to prove that half seasoned wood is better than wholly seasoned. For the reasons given in the "calculations," referred to, and from repeated direct experiments with stoves and hot-air furnaces, the writer of these remarks thinks far otherwise. It is indeed true that with an open fire-place, no advantage may result from the use of well seasoned wood, from the rapidity with which the inincreased heat is swept up the chimney; but our correspondent will observe that one object of those calculations was to show the inutility of fire-places. And it is also true that wood left to season in shady woods, or in wet places, may be half decayed and half spoiled, before it is dry; but this does not prove that wood thoroughly seasoned under shelter while perfectly sound, is not better than green.

It may be that the calculations were deficient in clearness, and thus led to misapprehension; the writer therefore hopes he may be excused for thus more fully explaining himself. ..... T.

Experiment with Indian Corn.—Enclosed I send you a statement of the result of an experiment made to satisfy myself as to the injury the corn crop would sustain from the practice of pulling off the blades at the usual time of "fodder gathering." I regret much that I did not take the tops from one set of rows; but I have but little doubt that it is a more injurious practice than either of the others. I felt anxious to know if the practice of cutting up the corn at the roots, which does not prevail in our section of country, would not injure the crop; and although from my experiment there was no material loss sustained, yet the experiment did not satisfy me, as from indisposition of myself at the time at which the corn arrived at the state that it is usually recommended to be cut, it was neglected, and consequently not cut till the blades were nearly all dry, and the corn fully matured. The extract annexed was taken from a letter written to my nephew at Marion, Alabama:

You desire to know the result of an experiment made on the corn, from a part of which you assisted me in taking the fodder, in order to ascertain what loss it would sustain from being deprived of its blades at the usual time of "fodder pulling." You will recollect we laid off 12 short rows, as near equal in quality as were to be found in the field,—that on rows Nos. 1, 4, 7, and 10, the fodder was left; as it was also on Nos. 2, 5, 8, and 11; that from Nos. 3, 6, 9, and 12, the blades were taken to the top. Nos. 1, &c., were left with blades on till gathered. Nos. 2, &c., stood till the blades were all dry to the ear, and some to the top, then cut off at the root and shocked up as tops are usually put up to cure when cut. Nos. 3, &c., remained on the ground,

as did No. 1, &c., till gathered. And now for the result.

No. 1 shelled, measured 1 bushel 1 gallon 2 qts. and 1½ pts., and weighed 71½ pounds.

No. 2—1 bush. 1 gal. 2 qts. and 1 pt., and weighed 70½ pounds.

No. 3—1 bush. and half pint—weighed 55 lbs.

The fodder from No. 3, &c., was carefully cured without being wet, and kept to itself, and when the corn was measured and weighed, it was also weighed. Its weight was 18 lbs., which, added to the weight of the corn from which it was taken, made 73 lbs. But 2½ lbs. more than the corn of No. 1, and 3½ more than that of No. 2. No. 1 and 2 were thought not to be quite as dry on shelling, as No. 3; they were consequently well sunned before the above measures and weights were taken; No. 3 was not sunned. Upon the whole, the experiment proves conclusively to my mind, what I before believed, that in pulling the fodder, we deprive our corn of the weight, or very nearly so, of the fodder taken. GEO. SEABORN. *Pendleton, S. C., Feb.* 21, 1847.

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POUDRETTE.—In the February number of the Cultivator, I notice a communication signed "Pennepack," referring to an experiment I made with poudrette on corn, the result being very different from what he expected. I can say I was disappointed in the result. I mentioned in that statement, that the poudrette I received was very different from what was shown in the office. Which was the best I could not say. That poudrette is a very good manure I have no doubt, but from some cause, that did not prove very profitable to me. I could perceive some difference in the fore part of the season, in the color of that on which the poudrette was used; it was of a darker green, but the size was very little if any larger. J. SHERMAN. *Milton, Feb.* 2, 1847.

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"THAT WHICH YE SOW SHALL YE ALSO REAP."—I have been a reader of the Cultivator for years, and have been pleased with the discussion on the subject of wheat turning to chess. I sowed a piece of new land to winter wheat, a few years ago. I purchased some clean seed wheat, but could not find enough that was clean, and was told that it would make no difference, for wheat would turn to chess if winter-killed. Necessity obliged me to try the experiment. I bought two bushels of wheat with some chess in it, and one bushel with twice as much as there was in the two bushels. I sowed the clean wheat on one side of the piece; next I sowed the two bushels, and next to that I sowed the one bushel. Land all the same quality except a few low places running crosswise of the field. The wheat was sowed lengthwise. It winter-killed in the low places. There was not one chess head to be found where the clean wheat was sown; but where the two bushels were sown, there was twice as much chess as I expected, and where the last bushel was sown, I believe it was one-eighth chess. There was ten times as much chess in the low places as anywhere else. I have never sown any chess since; neither have I raised any. I have heard some men say that they have known barley turn to oats, by being eat off by cattle when it was heading out. I think the last as true as the first. N. ROBINSON, Jr. *Stow, Vt., March* 1, 1847.

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CORN FODDER.—Last year I gave you a short account of my sowed corn crop. In the winters of 45, '6, it was my principal dependance for fodder. On the produce of two acres, I saved a horse, a yoke of oxen, three cows, and three young cattle, which else would have been nearly sacrificed, as were my neighbors' cattle. The drouth had so cut off the hay, that people offered one-half their stock to get the other half wintered, and no one would take them at that.

I was so well pleased with my experiment, that I determined to "try again." So this year I sowed the same amount of land again, at the rate of two and a half bushels of seed to the acre, broadcast. I had a fair yield, and the fodder proves equally as good as last year; and though I do not need it as last year, yet it is preferred by all my cattle to the best of hay. They will leave hay untouched when the corn fodder is before them, quite as much as they will leave straw when that and hay are both offered them at a time. They will eat up all the fodder clean, seeming to prefer the stalks (which are full of saccharine matter,) to the leaves. And when I feed with corn fodder, I use no grain, which I am obliged to do when I feed hay. On this account this food is admirable for calves, and young cattle. I am keeping some calves on this alone, without a particle of grain, and they are in fine order. Horses do not like it as well as hay. Cattle and sheep do much better.

On the ground of economy, it is altogether better than any other feed I have tried. It requires very little labor, except the harvesting, (which is a heavy job,) and the yield per acre, has been at least seven tons of cured fodder. It is called good grass that yields a ton and a half to the acre, and much does less. The only trouble about the corn fodder is, that it needs a great deal of curing. It is so green it will heat and spoil unless it is thoroughly dried. After trying several ways, I now bind it in small bundles as soon as cut—shock it right on the ground, and let the shocks stand six or eight weeks in this way, when it is so dry that it may be packed in a mow, and except the outside, is perfectly bright and free from must. The outside is blackened a little, but none of it is wasted. H. *Ohio, Dec.*, 1846.

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VIRGINIA SHEEP PASTURES.—In the year 1845, I stated in the Cultivator, that the mountains of Amherst must be equal to any portion of the earth for grazing sheep; and yet, the more I see and reflect, the more I insist on it. In the month of November last, I had two gentlemen to visit me from Washington Co., Penn., both of whom own large flocks of fine sheep, and on examination, they declared that the Cold Mountain is at least equal to any grazing lands they ever saw. One of those gentlemen, with two others, has now returned to Amherst, in search of lands, and say if they can purchase farming lands in the county, then they will buy the mountains for grazing.

Since the above mentioned publication in the Cultivator, I have received sundry letters of inquiry as to those lands, and now make a general answer.

A considerable portion of those lands cannot well be richer; and when cleared, a luxuriant growth of greensward and white clover takes full possession, and furnishes pasturage from March till January. I say this grass takes full possession, because nothing of the brier, shrub, or thistle kind, or any other pess, is found on those mountains where they are grazed. Indeed, in many places, acres of greensward are seen where fires have killed the trees and bushes, and where, perhaps, they will never grow again. The tops of those mountains are certainly best for sheep, and here nor near their summits, neither Indian corn, tobacco, nor wheat, can be grown. Of course, I here speak of our highest mountains, for we have hills and mountains of every grade usual in Virginia. Rich and handsome mountain land can be bought for $1 the acre—rich and rough, at about 50 cents—poor, from 10 to 50 cents per acre.

It is useless to answer about roads and schools, further than the remark, that we are an enlightened people. Come and see.

Lands lying well in the heart of the country, and improved, can be purchased for from two to eight dollars, and these adapted to all the valuable products of the country.

The mountains are well adapted to the growth of rye, oats, buckwheat, hemp, flax, potatoes, turneps, beets, apples, orchard grass, timothy, greensward, and white clover; and the valleys between the mountains produce yellow corn and tobacco tolerably well. ZA. DRUMMOND. *Amherst, Va.*, 1847.

One of the gentlemen from Pennsylvania, is well known at Lowell, his wool selling there for the highest price. His name is Patterson. Mr. P.'s associate is now with me, and says they have determined after full *search*, to graze about 900 fine sheep on the highest mountain in Amherst. Z. D.

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FIXING AMMONIA.—It is said that plaster of Paris (gypsum, or sulphate of lime,) fixes the *ammonia* of rain water by forming with it a *sulphate of ammonia*, which is a fixed salt. This I do not understand; my tables of affinity stand thus, with respect to the degree of affinity which certain bodies have for *sulphuric acid*. For example—

Sulphuric acid.—1. Baryta; 2. Strontia; 3. Potassa; 4. Soda; 5. Lime; 6. Ammonia, &c.

Now by this, it is evident to me that if carbonate of lime and sulphate of ammonia are mixed together, the result would be sulphate of lime and carbonate of ammonia, a *very* volatile salt, whereas no salt of ammonia could decompose the sulphate of lime, lime having a stronger affinity for sulphuric acid than ammonia. I could understand the theory well if ammonia stood in the place of soda. Perhaps some of your chemical correspondents would explain this discrepancy, or apparent discrepancy. Probably the plaster of Paris is a *super-sulphate* of lime, in which case I can imagine the ammonia combining with the excess of sulphuric acid. T. H. *Colchester, Canada West.*

[We apprehend there may be a difference of opinion in regard to the above table of affinities. We should like to hear the remarks of any of our chemical friends in regard to it.—EDS.]

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AGRICULTURAL CAPABILITIES OF NORTH CAROLINA.—The agricultural capabilities of this part of North Carolina, are by no means great or extensive; other avocations absorb the attention of the mass of our population. Our lands consist principally of extensive forests of pine barrens. Turpentine, lumber, and tar, the produce of those forests, afford means of subsistence to the majority of our people. There are some good lands on our rivers, and a strip on our sea coast, beginning 10 miles from Wilmington and extending northwardly about 50 miles, with a breadth of from one to two miles. The public road, which passes close to this region, presents the most uninviting aspect in the universe—the deserts of Africa not more so—and a traveler would little suspect that he was in the neighborhood of extensive and not unfertile plantations. Of this region, being my locality, I shall more particularly speak.

The growth of timber in its primitive state, was oak, hickory, and walnut; the soil a dark sandy loam, producing fair crops of everything but wheat. The timber is nearly all cut down, or rather destroyed; for, pertinaciously treading in the steps of our forefathers, we are in the habit of clearing land, "killing" it by injudicious cultivation—clearing more, and "killing," until all is cleared and exhausted; and then we have nothing to do but clear ourselves. Log-rolling succeeds log-rolling, and heaps of beautiful timber are annually devoted to the flames, until in a few years there will be nothing to feed flame in kitchen or parlor.

The farmers of late years have turned their attention to the culture of pea-nuts. This crop resembles, in its more luxuriant state, a field of red clover. It is a most destructive crop to land. The usual ordeal is to plant after all the vegetable matter has been cleared from the land. When harvested, it is entirely removed from the soil, leaving no vestige of vegetation; the high winds in winter and spring, take off the loose and exposed soil, and although we are sensible of the homicide, or rather *land slaughter* we are committing, cupidity is so excited by the tempting prices the article bears in market, that neither Moses nor the Prophets, nor one risen from the dead, would deter us from pursuing the injurious course. Yet we are an industrious people; but the system of farming needs a radical change, and I think it can be effected only by taking and reading useful publications, like yours. I take my full share of the rebuke with my neighbors, and perhaps am more to blame than they for sinning against light and knowledge.

Between the main land and the sea shore, is a marsh apparently of alluvial soil, about 1½ miles wide, intersected with innumerable creeks of salt water, presenting to the eye one of the most delightful meadows in nature. It sustains a coarse grass, from two to three feet high, which horses and cattle will eat, and many of these animals are reared entirely upon it, the grass being perennial. Whence the alluvial deposit proceeds I know not, as there are no large rivers making into the marsh; the country back for 100 miles being sand, and almost a dead level. It is filled with beds of oysters, and on the margin of high land, by the continual attrition of the tides, those shells become pulverized, being no bad substitute for marl. A friend of mine, a respectable scientific farmer in the interior of the state, has taught me to make an excellent manure from the mud, grass, and shells. The process is as follows:—Make a bed of marsh mud, say thirty feet long by 8 feet wide, and one foot deep. On this put the pulverized shells two or three inches deep; place on them 8 or 10 inches of the coarse grass,—then a coat of mud, and proceed as in the first course, alternating the materials until your heap is about four or five feet high. Then cover the whole with a thick layer either of mud or of common soil. This should be done while the grass is green. Let it stand until winter sets in; then cut it down with spades, turn it over, and apply it to the soil, after the first plowing.

By this process, the acidity in the grass will in a great measure be destroyed; yet the compost will carry enough of the grass and lime into the soil to give it a healthy action. Let the beds be formed on the soil to be cultivated.

This process may meet the eye of some farmer similarly situated with myself, on our extensive seacoast, and if he derives any benefit from it, I shall be amply compensated for my trouble in making it known. J. D. JONES. *Topsail, New Hanover Co., N. C., Feb.*, 1847.

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BREEDING SHEEP.—Whatever may be the diversity of opinion in regard to in-and-in breeding, to a limited extent, there is no doubt of its injurious tendency when carried to any considerable length; and it is a matter of some moment to be able to discover, by visible signs, those animals whose constitutions have been thus injured. In swine, it is a commonly received opinion, that a hollow back of the shoulders, is a pretty sure indication of this course of breeding.

My principal object in this article, is to start the inquiry, what is the index of in-and-in breeding among sheep? It is an opinion of those who speak with the voice of oracles, that the falling of the wool upon the shoulders,—a lifeless appearance of the wool in that part of the fleece, is the unerring evidence of it. Is this true? It is doubtless true that this trait is found in many flocks where this pernicious system has been practised. If there was originally any of this bareness upon the shoulders, in-and-in breeding would doubtless perpetuate, perhaps increase it, unless an effort was directed to breed it out. Upon what evidence is this

opinion based? If the theory is established, unquestionably many facts may be adduced, seeming to corroborate it; but the question is, upon what facts is it established?

Now I have the experience of the best shepherd of my acquaintance, and who has no superior in Ohio, upon this subject. He does not deny that this may be the true sign and result of breeding in-and-in, but says he has no sufficient evidence; on the contrary, his own observation contradicts it. His flock is one of the oldest in the state. About fifteen years ago, this peculiarity prevailed to a considerable extent in his flock; there had never been any in-and-in breeding whatever; but now he attempted to breed it out, and used for this purpose rams from his own ewes, but of foreign rams. In a few years this fault disappeared, in consequence of his breeding in reference to it.

It is an opinion that breeding in, has a tendency to render the wool harsh. This is believed by many excellent shepherds. Now, is it not true that to a great extent, animals are in the care of the breeder as clay in the hands of the potter? You may breed horns on your flock, or breed them off—woolly legs or bare legs—long wool or short—close or open. May not this peculiarity of the shoulders be a similar trait, which may be bred in or out at pleasure? And is not the above instance a pretty clear evidence that this *result* of interbreeding may be obliterated by the very course which is said to produce it?

In agriculture, emphatically, experience should be the lamp to direct our path, and it is facts we want. Just now the growing of fine wool is engrossing the attention of the people of eastern and northern Ohio, and whatever relates to the subject is of vital importance.

Our hill land in the county of Washington, yields excellent pasture for sheep, and upon the bottom lands we suffer the grass to grow upon the meadows without pasturing until winter, as this aftermath affords the best winter feed in our mild climate. Sheep are very healthy here, and this winter, thus far, have done well. DARWIN E. GARDNER. *Marietta, Ohio, Feb.* 1, 1847.

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MOUNT AIRY AGRICULTURAL COLLEGE.—We have received from JAMES GOWEN, Esq., a copy of a prospectus for the establishment of an Agriculturul College, to be located on his estate called Mount Airy, near Philadelphia. Mr. G. is a gentleman possessed of abundant means for carrying on such an institution, and he has for a long time taken a deep interest in rural affairs, and zealously devoted himself to the advancement of agriculture and horticulture. In this laudable undertaking, we are confident he has been influenced by no motive of speculation or pecuniary gain. Want of space prevents our giving the prospectus entire, though the principal outlines of the plan are shown in the following:—EDS.

To educate youth in the leading branches of popular learning as taught in our Colleges, with the addition of practical and theoretical Agriculture and Horticulture, with their attendant sciences, the undersigned contemplates founding an Agricultural College at Mount Airy, his residence, eight miles from the city of Philadelphia, a site favorably known for its healthiness and beauty, and as having until recently been, for many years, a seat of learning, and now in gardens, grounds and buildings, admirably suited for the purpose.

Students will be admitted at ten years old and upwards. The young pupils in the elementary branches of the scholastic department will receive special and particular attention. The more advanced in years and learning, on entering, will be classed according to their qualifications, and all will be carried forward as rapidly and understandingly as practicable, to a perfect and thorough completion. In the Agricultural department a similar classification will be made in view of the age and capacity of the students, and their exercises proportioned accordingly. The exercise or labor of all however, will amount to no more than will be deemed necessary for healthful recreation and change, to diversify and lighten the monotonous and depressing drudgery of the mere student. In this way, by a varied course of study, rural exercise, and popular lectures, it is intended to accomplish the important work, and to give to Agriculture an impulse that cannot fail to raise it to the rank it should assume, and ought to hold throughout the land.

These views are respectfully submitted by way of prospectus, affording a glance at the aims and merits of the contemplated Institution, and for the purpose of eliciting such share of patronage as will encourage the undersigned to carry out his long cherished design. If therefore eighty students shall offer, on or before the first day of July next, he will open the college on the first day of September following, with a faculty combining the best talent, both in literature and rural economy.

The terms will be *two hundred dollars* per annum for board and tuition, payable half-yearly in advance—no extras, except for modern languages, for which it may be necessary to make some additional charge, all of which, when properly matured, will be stated in a special prospectus, when the requisite number of students shall appear to be forthcoming.

Parents wishing to avail themselves of this plan of educating their sons, will please address JAMES GOWEN, Mount Airy, Philadelphia, stating age and acquirements in learning. It is requested that early application be made, as the opening of the college is contingent upon the number of students offering, and as much of the *materiel* necessary to its perfect organization must be withheld until it is ascertained that sufficient patronage will be accorded.

A word as to the undersigned himself.—To those who know him 'tis needless to say, that this great undertaking is prompted by no interested motive whatever; for all the capital to be employed, and all the trouble and anxiety incurred, he expects not a dollar by way of profit or remuneration for his services. He therefore wishes to stand in the proper attitude before all, and leave to all the means of making a fair estimate, and coming to a proper determination so far as they may feel interested. JAMES GOWEN. *Feb.* 22, 1847.

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STEAMING APPARATUS.—I want to erect a steaming apparatus, to steam at least 100 bushels of chaff, or cut straw, together with such other feed as I want to mix up, say the whole not less than 100 bushels, at one steaming. Now, if any of your numerous subscribers have such an one, I should be obliged by their giving a full description of the same through the Cultivator, with the cost exclusive of the building, and if at not too great a distance, I would go and see it. I know that straw or chaff scalded is much better feed than dry, but this is too much work where there is a large stock, and I think steaming would be much more economical. By giving this in your April Cultivator, you will much oblige A SUBSCRIBER.

[We are unable to say where such an apparatus as is above inquired for can be found, but insert the communication in the hope that it may be the means of bringing out the desired information, as well as the opinions of our readers in regard to the profit of steam-food for stock.—EDS.]

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A ROARING FOUNTAIN.—The highest fountain in the world, is on the grounds of the Duke of Devonshire, in England, where a single jet is thrown up to a height of 267 feet—more than 100 feet higher than Niagara Falls. The eight acre reservoir which supplies it. is 389 feet above.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

COMMUNICATIONS have been received since our last, from J. V. D. Jones, Caius, Prof. J. P. Norton, B. C. Van Vleit, J. Bolding, A Subscriber, D. T. Brown, Elisha Hammond, W. J. Bingham, N. Robinson, Jr., Geo. Seaborn, N. H. Waterbury, Dutchess Ag. Institute, A. W. St. John, P., Ruralist, A Subscriber, Wm. Bacon, R. L. Pell, Prof. Lardner Vanuxem, A Constant Subscriber, A. P. P., Son of a Subscriber, Wm. Canfield, Henry Brewer, Thomas Close, Wm. R. Prince.

BOOKS, PAMPHLETS, &c., have been received as follows:—Proceedings of Clinton Co. Ag. Society for 1846, from W. KEESE, and others.——The Chemical Principles of the Rotation of Crops, by D. P. GARDNER, M. D., from the Author.——Agricultural Reports made to the Standing Committee of the Rhode-Island Society for the Encouragement of Domestic Industry, from J. G. CLARKE, Jr.——Catalogue of Fruit and Ornamental Trees, cultivated at the Syracuse Nursery, by THORP & SMITH——Catalogue of Green House Plants, Shrubs, Roses, Herbaceous Plants, &c., cultivated by L. MENAND, on the Troy Road, near Albany.——Forty-first Report of the Trustees of the Public School Society of New-York. ——Report on the Trees and Shrubs growing naturally in the Forests of Massachusetts, by GEO. B. EMERSON, a beautiful octavo vol. of 550 pages, from JOSEPH BRECK, Esq.

C. B. Redford, Mich.—We shall be glad to receive the communication you propose to write.

NEW-YORK STATE AGRICULTURAL SOCIETY.—We publish in this number, the Premium List of the New-York State Agricultural Society, to which we invite attention. It will be seen that the amount of money offered is much greater than in any former year, being upwards of three thousand dollars. Nearly all the premiums are increased in amount, and many important ones added. In the departments of Fruits and Experiments particularly, very important extensions have been made, which can hardly fail to attract notice and insure a rich exhibition, as well as to bring out much valuable information. The Fair, it will be seen, is to be held at Saratoga Springs, and we believe that the people of that place and vicinity are determined to do all in their power to render it in every respect what it should be. The keepers of hotels and boarding-houses have issued a circular by which it is shown that they will board and lodge guests at the time of the Fair at the ordinary rates of charge—the prices averaging from one to two dollars a day—the latter being only charged at the first-class hotels—the "United States," "Union Hall," "Congress Hall," &c.

☞ The Louisiana State Agricultural Society, at a meeting recently held at Baton Rouge, unanimously elected the Hon. ZADOCK PRATT, the enlightened and patriotic President of the Greene Co., (N. Y.) Ag. Society, an honorary member of that association. Mr. Pratt has done, and is doing, much to advance the industrial interests of our country, and the compliment thus paid him was richly deserved.

RHODE-ISLAND SOCIETY FOR THE ENCOURAGEMENT OF DOMESTIC INDUSTRY.—We have received from J. G. CLARKE, Jr., Esq., a copy of the Reports made to the standing committee of this Society for 1846. On looking over the pamphlet we find various interesting matters, and shall in due time appropriate some of them to our use. This Society has been the instrument of great good to the state of Rhode-Island. We would acknowledge our obligation to the officers for the subscription of 175 copies of the Cultivator.

DRILLING ROCK.—We have lately examined a machine for drilling rock, called "SCOVILL'S PATENT HAND AND HORSE-POWER DRILL," which appears to be a very valuable invention. Worked by one horse, this machine has been proved to do the work of twenty-five men, by the ordinary mode of drilling. It has been used in several situations, and is much approved by all who are acquainted with it. The engineers on the Illinois and Michigan canal, where the machine has been extensively used, certify that a well constructed drill, worked by two horses, will drill in a solid rock a hole five inches in diameter, forty feet in a day. Dr. R. DIBBLE, Rochester, is agent for this State and Pennsylvania.

SPECIMEN'S OF APPLES.—We are indebted to NATHAN HOWARD, Esq., of Stephentown, for samples of several kinds of apples, among which are the Newtown pippin, Monstrous pippin or Gloria mundi, Scarlet nonpareil, King apple, (perhaps the *Newark King*,) and the "Prentice russet," (perhaps the *English russet*.) All the specimens, with the exception of the Newtown pippin and the russet, were too over-ripe to show their true flavor. The russet is a beautiful apple and of very rich sprightly flavor.

MORGAN HORSES.—We invite attention to Mr. WIER'S advertisement in this number, of the horse called "Gifford Morgan." This is the horse, it will be remembered, which, together with the "General Gifford," attracted so much attention at the State Show at Auburn. Mr. W. informs us that he has sold to E. MARKS, Esq., of Syracuse, a Morgan mare and her colt, (a superior animal,) by the Gifford Morgan, and he also states that Mr. M. purchased at the same time another mare and filly by the same horse. These, with the "General Gifford," and the Morgan stock mentioned in our February number as having been purchased by Gen. BURROUGHS, will give the people of central and western New-York an opportunity of seeing what the real Morgan horses are.

LARGE FLEECE.—"A CAYUGA WOOL GROWER" sends us a statement in reference to the fleece of a Merino ram, called *Columbus*, belonging to ERASTUS ROBINSON, of Shoreham, Vermont, which received the first premium at the show at Middlebury last fall. It is said—"Columbus is three years old last spring, was sheared six days after being well washed; his fleece, which lacked twenty days of one years' growth, weighed thirteen pounds and two ounces." The same writer states that Mr. R. has a good flock of Merino sheep.

LARGE CALF.—Mr. J. M. CLEAVELAND, of Adams, Jefferson county, N. Y., gives us an account of the weight of a Durham bull calf. At nine months and fourteen days old, it is stated that he weighed "910 pounds, in the presence of a crowd of witnesses."

BEE-HIVE—We have received a communication from B. C. VAN VLIET, of Poughkeepsie, in regard to Mulholland & Crane's bee-hive, a cut and advertisement of which was given in our July number for 1845. This hive is on the subtended principle: that is, it consists of sections or boxes placed vertically over each other, and as the bees fill them empty ones are placed at the bottom. It is a very good mode of managing bees, but is not new, having been in use for more than sixty years. In regard to the *color* of bee-hives, Mr. Van Vliet recommends that they should not be white; because, as he thinks, "anything white attracts the miller as they fly at night. Set a pan of milk," he says, "near a bee-

house, and in the morning the surface will be covered with dead millers."

SAMPLES OF WOOL.—We have received several samples of Merino wool from JOHN W. PADDOCK, Esq., of Wyoming, N. Y. Some of them are very handsome. He states that his flock, consisting of upwards of 200, will average four pounds of "clean" wool per head, and that his "stock buck" sheared last year eight pounds of "washed" wool.

MANUFACTURE OF FLOUR.—Mr. JOHN BOLDIN, of Philadelphia, wishes for "extensive information about the system of flour-making in Rochester." We would suggest that he address some of the manufacturers in that city, stating the particular kind of information wanted.

DISEASE OF THE BUTTON-WOOD TREE.—S. RUCKMAN, Esq., of Bath county, Va., informs us that the button-wood or sycamore is affected by some malady or insect which causes its decay. He is inclined to think it is a "small bug," many of which he says he has seen on one small limb. Our readers will recollect that mention has frequently been made in our columns of the disease of this tree, and we believe it has been before suggested that it was caused by an insect. We should be glad to know, however, whether any one is able to describe the insect which is supposed to be the cause of the trouble.

DIFFERENCE IN THE QUALITY OF MILK.—Farmers in general are not aware of the great difference there is in the richness of milk. In butter dairies, especially, this is a point which deserves attention. The mere fact that a cow gives a large quantity of milk is scarcely any evidence of her value for the production of butter. It is but a short time since we heard a farmer state that he had a cow which would give from 20 to 22 quarts of milk per day, and he had till last season always considered her a first-rate cow; but it then happened that her milk was set separately for butter, when it was proved that only about four ounces per day could be obtained. This may be called an extreme case; but let the milk of various cows be fairly tried, and a surprising difference will often be seen. Mr. NEWELL, in his address before the Essex County (Mass.) Ag. Society, observes that according to his observation, there is much less uniformity in the milk of what we call "native" cows, than in that of the Ayrshires and Alderneys. He says—"A few years ago I made a little experiment to test the quality of the milk of sixteen cows.—A gallon of each cow's milk was set by itself, and after standing twenty-four hours, the cream from each was churned by itself, and the quantity of butter ranged from three to eight ounces." Thus is it seen that while the milk of some cows afforded a pound of butter to every eight quarts, it required more than twenty-one quarts of the milk of some others to make that quantity. Will not this fact be remembered?

CHICCORY.—This plant was formerly cultivated chiefly for its value as food for cattle and sheep—the leaves being cut for this purpose several times a year. It is now much cultivated in England for the purpose of mixing the dried roots with coffee. Mr. COLMAN, speaking of its cultivation for this purpose, says—"Chiccory is to be sown in April, like carrots in drills, kept clear of weeds, and the plants thinned out to the distance of six inches in the rows. In September the leaves are taken off and the plants dug with a fork; they are then washed and split by hand, and kiln-dried, and sold to other factors, who cause them to be burnt and ground like coffee, which, in that case, they entirely resemble. They greatly deepen the color of the liquid when prepared as coffee; and when mixed in the proportion of a fifth, they communicate no unpleasant taste."

ANSWERS TO INQUIRIES.

CONNECTICUT TOBACCO.—W. C. N., (Maysville, Ky.) For the mode of cultivating tobacco in Connecticut we refer you to an article in vol. 1, new series of the Cultivator, page 87. We should like to have some one explain the difference between the Kentucky and Connecticut tobacco—showing the reason why the latter should be worth, (as it generally is in New York,) more than double the price of the former.

SUBSOIL PLOWS—J. W. L., (Monroe, Pa.) The prices of subsoil plows are as follows: For the size suited to one horse, $5; for two horses, $7; for six oxen, $12. A charge of $1.50 more is made for the addition of a wheel and draft-rod.

WORN-OUT LANDS IN MARYLAND.—W. T., (Frederick county, Md.) We should think one of the best modes of improving the worn-out soils of your region, would be that practiced by GEORGE PATTERSON, Esq., described in vol. 2, new series of the Cultivator, pages 204, 205.

ALPACAS—COTSWOLD SHEEP, &c.—A. C. R., (Kirtland, O.) There have been no alpacas imported into the country, or not more than one or two, which have been kept in menageries. It is not probable that they would cross with the Merino, or any other of our domestic breeds of sheep, as they belong to a different genus—being more nearly allied to the camel than the sheep. If, by chance, a hybrid should be produced between the alpaca and common sheep, it is probable it would be barren. Cotswold (or improved Cotswold) sheep differ from Leicesters in being somewhat stouter framed, having generally rather hardier constitutions, and producing heavier fleeces. Their wool is from seven to ten inches in length, and fleeces average from six to eight pounds—*clean* wool. When fatted they weigh from 25 to 35 pounds per quarter. Their value here is from ten to twenty dollars per head.

BUCKTHORN HEDGE.—"A Subscriber," (Hanover, N. H.) Mr. DOWNING, in an excellent article on the cultivation of hedges in the February number of the Horticulturist, advises that the plants should be cut down to within six inches of the ground; that the following spring they be cut so as to leave one foot of the "current season's growth;" that they be "shortened back" the third year so as to leave one foot of the year's growth; and he adds—"this course must be pursued every spring till the hedge is of the desired height and form, which will take place in five or six years."

TILES FOR DRAINING.—J. W. P., (Wyoming, N. Y.) Tile which are properly made, will no doubt answer the purpose of draining well, and we presume would not "dissolve." They have been used extensively in England and Scotland for a long time.

SHEEP HUSBANDRY.—J. F. J., (Park Hill, Va.) The number of sheep which can be pastured on an acre, depends, of course, on the quality of the soil and the favorableness of the season We have known seven kept on one acre for several months, but the best of grass land is required for this, if the sheep are expected to thrive—in some instances the same extent of land would not support three. One hundred Merino sheep are as many as are usually kept together in winter; but more may be kept in a flock in summer, only giving range and food in proportion to numbers. It is preferred (for large flocks) to have lambs dropped at the time when the grass has started so as to afford the ewes a "bite." The period of gestation with this animal is five months, so that it is easy to see when the ram should be put with the ewes, to have the lambs come at the season when the grass may be expected to be at the right stage. The average weight of common Merino fleeces, washed in the ordinary way, is three pounds, and the wool is worth now about thirty to thirty-five cents per pound.

We do not know what is "customary," in regard to a division of profits, where one person furnishes land and another sheep. As a work comprising much information on sheep, we recommend MORRELL'S "*American Shepherd*," which is for sale at most bookstores in the eastern cities.

SEED OF THE BUCKTHORN.—W. J. B., (Hillsboro', N. C.) The seed of the Buckthorn can be obtained at the Albany Ag. Warehouse and Seed Store, and we presume, at the seed stores in the principal cities. The sets can probably be obtained of most of our nurserymen.

OSAGE ORANGE.—The article on this subject in our Dec. number, last vol., comprises about all the information we are able to furnish in regard to it.

TIME FOR CUTTING TIMBER.—The general opinion is that stumps are less likely to sprout if the growth is cut in August. In regard to the durability of the timber, we think it makes but little difference when it is cut, provided it is immediately seasoned, or thoroughly dried.

LEACHED ASHES.—B. M. J., (Frederick county, Md.) Leached ashes do not generally act as favorably on heavy clay soils as on those of a lighter and more sandy character. We should think, however, that from 100 to 200 bushels per acre, in connexion with a clover sod, or with a portion of the clover crop turned in, would have a highly fertilizing tendency; but we should be rather in favor of trying 100 bushels per acre before using double the quantity. The effect of ashes and other alkalies in regard to the growth of sorrel, we think has not yet been fully settled, and we cannot, therefore, say what would be the result from its use in this respect. As to the *profit* of using leached ashes "at eight cents per bushel," that can only be determined by the extra produce they enable the land to yield, and the value of that produce. As to the question whether leached ashes are "more valuable than good barn-yard manure, well rotted," it will depend on circumstances. On some soils, ashes would probably be worth more than the same quantity of manure. On the heavy soil which you describe it is doubtful whether they would be worth as much. [See Cultivator, new series, vol. 2, page 87, and vol. 3, pages 110, 173.]

SEED-CORN.—A. L., (St. Josephs, Mich.) Corn which is perfectly ripe and *dry*, is not injured for seed by being exposed to any degree of cold in the crib or shock.

CHARCOAL AS MANURE—SOAKING SEEDS IN AMMONIA.—L. R. M., (Toronto, C. W.) We have no information in regard to charcoal as manure, except what has been heretofore published. As to soaking seeds in ammonia, the results from it have been very uncertain, and the practice is of doubtful utility.

QUANTITY OF CARROT SEED FOR AN ACRE.—A SUBSCRIBER, (Simsbury, Ct.) If the seed is of good quality and well cleaned, two pounds is sufficient for an acre. The rows should be at least eighteen inches apart, if it is designed to use a horse with a harrow or cultivator, in the cultivation of the crop. Three inches space should be allowed between the plants in the row, if it is wished to obtain the greatest yield.

FOOD FOR MILCH COWS.—B. S., (Bedford, N. H.) For winter food we prefer well-made clover hay, cut while in blossom. If something in addition is given, we should prefer two quarts of Indian corn meal with a quart of wheat bran or shorts. For roots we prefer carrots or potatoes, and would give from a peck to half a bushel per day.

A GOOD SALE FOR GOOD BUTTER.—The *Binghampton Courier* states that sixty firkins of butter from the dairy of O. C. CROCKER, Esq., of Union, Broome county, was sold in New York in February last, for 22½ cents per pound.

NOTICES OF NEW PUBLICATIONS.

FIRST ANNUAL REPORT OF THE OHIO BOARD OF AGRICULTURE, for the year 1846, made to the Legislature, and published by their order.

The Legislature of Ohio, at its session in 1846, passed an act authorizing the organization of a "State Board of Agriculture." This body, having been duly formed, proceeded to take measures for obtaining, in accordance with the provisions of the original act, "a general view of the condition of agriculture throughout the state;" and for this purpose a circular was issued by the Board, calling for information from the different counties in relation to the character of the soil, the principal crops cultivated, the prices usually obtained for them, &c., &c. Answers to this circular, more or less full, have been received, and are published, from fifty-one counties. The information in regard to the yield of crops, is not so full as could have been desired. The estimates appear to have been made without reliable data—the persons who submitted the reports for the several counties, generally stating what the yield was thought to be. In some instances the range of the yield is shown by stating the minimum and maximum. Under these circumstances it is difficult to make out from the returns what may be called an average for the state; but in making some calculations in reference to this point, we have taken the amount given for the different counties in those cases where it is specified, and for those counties where the maximum and minimum are given, we have taken the medium; and in this way deduce the following:

In relation to Wheat, the Report gives returns from forty-four counties, showing a yield of from twelve to thirty bushels per acre—an average being about seventeen and three-fourths bushels.

In relation to Indian corn, there are returns from thirty four counties, showing an average of about forty and a quarter bushels per acre.

Twenty-three counties give returns for oats, showing that the yield of this grain ranges from twenty-three to forty-five bushels per acre, the average being about thirty-four and three-fourths bushels.

The Report, however, contains much interesting information in relation to the agricultural resources of Ohio—a state whose natural capacities are not excelled by any one in the Union; and as the government and people seem to have become convinced of the importance of encouraging and improving the art which constitutes the basis of all prosperity, we trust the efforts so well begun, will be continued; and the result, we are confident, will be highly beneficial.

ALLEN'S BEE-CULTIVATOR, embracing the Natural History, Physiology, and Management of the Honey Bee; by Thomas R. Allen, Syracuse.

A small pamphlet which contains some good practical observations on the management of bees.

CHEMISTRY OF THE FOUR SEASONS, Spring, Summer, Autumn, and Winter: an Essay principally concerning Natural Phenomena, admitting of interpretation by Chemical Science, and illustrating passages of Scripture; by Thomas Griffiths, Professor of Chemistry in the Medical College of St. Bartholomew's Hospital, Author of "Recreations in Chemistry," and "Chemistry of the Four Elements." Lea & Blanchard, Philadelphia.

In the preface to this work, the author states he had had the "high and enviable honor of delivering before the queen" his essay on "The Chemistry of the Four Ancient Elements," which, having by "gracious special permission" been dedicated to Her Majesty, "had the good fortune to meet with a favorable reception from the public;" and he adds, "I am therefore induced to publish the Chemistry of the Four Seasons." It is a work which he tells us is not written for the "proficient, but for the unitiated in Chemistry." It

contains some very interesting observations on natural phenomena, though we do not in all cases perceive the illustration of "passages of scripture," by reference to chemical science.

THE CHEMICAL PRINCIPLES OF THE ROTATION OF CROPS; pronounced before the American Agricultural Association, March 4th, 1846; by D. P. Gardner, M. D., Honorary consulting Chemist of the Association, Member of the Lyceum of Natural History, etc., formerly Prof. of Chemistry and Natural Philosophy, in Hampden Sidney College, Va.

The leading object of Dr. GARDNER, in this essay, has been to explain the necessity of a rotation of crops on chemical principles, and in this we think he has perfectly succeeded. We recommend the paper to the notice of the public as containing a plain and satisfactory view of the subject to which it is devoted. The paper forms a part of the Transactions of the American Agricultural Association.

AMERICAN JOURNAL OF SCIENCE AND ARTS: Conducted by Professors B. Silliman, and B. Silliman, Jr., and James D. Dana. New Haven—$5 a year—published every second month.

A very valuable work. Every number is filled with articles of interest to the man of science, and many of them are of such a character that they are perused with much pleasure and advantage by ordinary readers. The number for March has articles, among many others of value, on Hybridity in Animals, considered in reference to the question of the Unity of the Human Species; Observations on the Uses of the Mounds of the West, with an attempt at their classification; Geological results of the Earth's Contraction in consequence of cooling.

ADDRESS before the Farmer's Association of Lewinsville, Fairfax Co., February 2, 1847, by Samuel S. Randall. Published in pursuance of a vote of the Association.

We have received a copy of the *Fairfax News* containing a copy of the above address. It is an interesting and valuable document, well calculated to stir up the people of Virginia to the improvement of their agriculture. It is gratifying to us that Mr. RANDALL is so well pleased with his new location, where we have no doubt he will render himself highly useful, by co-operating with others in inspiring a taste for rational agriculture and its kindred branches.

SOWING CLOVER SEED.

THOSE who have not yet sown nor procured their clover seed, should remember the result of experiments, published in the Cultivater some years ago, which proved, *that cloverseed kept over one summer, would be dear at half price.* This seed greatly deteriorates by age; hence care should be taken to have it as fresh as possible.

Experiments performed in England have shown that clover seed does best when but very slightly covered, or very near or at the surface of the earth. Thirteen compartments or beds were sown, the seed in each successive one being buried a quarter of an inch deeper than the preceding; and varying from merely sprinkling on the surface, to three inches deep. The following numbers indicate the number of plants which came up in each bed from an equal number of seed, each successive one being a quarter of an inch deeper:—17, 16, 14, 11, 11, 8, 4, 4, 0, 0, 0, 0, 0. From no depth to about one inch, the seed mostly came up; but two inches deep and deeper, none came up. Hence the impolicy of covering cloverseed with a heavy harrow; washing in by rain on fresh earth, or working in by the crumbling influence of frost, being better.

EXTENSIVE PEACH ORCHARDS.—Downing's Horticulturist states that in the county of Newcastle, Del., there are about 2,500 acres devoted to peach orchards, the annual product of which is nearly or about $200,000.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, March 19, 1847.

FLOUR—Genesee, per bbl, $6.87½*a*$7—Ohio and Michigan, $6.87½

GRAIN—Wheat, white, per bushel, $1.60*a*$1 75—Rye, northern, 87½c.—Corn, Northern and Jersey, 85*a*95c.—Barley, 75—Oats, 43c.

BUTTER—Orange County, per lb., 20*a*22c.—Western dairy, 14*a*16c.—Ohio and Shipping, 9*a*10c.

CHEESE—Best shipping, per lb., 8*a*8½c.

BEEF—Mess, per bbl., $11*a*12—Prime, $8.50*a*$9.50.

PORK—Mess, per bbl., $14.25—Prime, $12.25

HAMS—Smoked, per lb.. 9 cts.

LARD—Per lb. (new) 10c.

HEMP—Russia, clean, per ton, $210—American, dew-rotted, $120*a*$140—American water-rotted, $175*a*$225.

HOPS—Per lb., first sort, 9*a*11c.

TOBACCO—Connecticut, per lb., 10*a*11c—Kentucky, 3¾*a*4¼c.

SEEDS—Flax, per bushel. $1.64*a*$1.30—Clover, per lb., 7¾*a* 8¼c.—Timothy, (herds-grass,) per bu., $3.

COTTON—New Orleans and Alabama per lb., 10*a*13¼c.—Florida, 13¼c.—Upland, 9¾*a*12½c.

WOOL—(Boston prices.) March 19:

Prime or Saxon fleeces, washed per lb.		42*a*47 cts.
American full blood fleeces,		37*a*40 "
" three-fourths blood fleeces,		30*a*35 "
" half blood do		25*a*32 "
" one-fourth blood and common,		25*a*28 "

POSTSCRIPT.—March 22d. The steamer Hibernia arrived at Boston on Saturday afternoon, at 4 o'clock. The news from England is twenty-nine days later. The prices of Bread-stuffs are somewhat higher than at the last previous advices. The following is a comparison of the prices at the time of the sailing of the steamers of the 4th Feb. and 4th March:

	4th Feb.	4th March.
Flour,	40*a*41s.	39*a*42s.
Wheat,	11s. 3d.*a*11s. 9d.	11*a*12s.
White Corn,	68s.	69*a*70s.
Yellow do	70s.	72*a*73s.

The impression in England is, that prices will be fully sustained for some time to come.

FOR SALE.

SHORT HORN and Devon Cattle—each thorough-bred of their kind. The cattle of these stocks have been bred many years by the subscriber, and were originally selected from the best herds, and crossed with the best and latest imported blood, with a particular view to the development of their most valuable qualities.

Also, thoro'-bred Cotswold, (long-wooled,) and South Down Sheep, of the best descriptions, descended from the choicest English flocks.

They can be forwarded from here east and north, by canal and railroad, and west by steamboat, with safety and dispatch.

LEWIS F. ALLEN.

Black Rock, N. Y., April 1, 1847.—apl & j'y.

THE OLD MORGAN GIFFORD HORSE,

SO well known in Vermont and New Hampshire as the highest blooded Morgan stallion now remaining, will be found the coming season at the subscriber's stable, in Walpole, N. H.

Terms—$15, of which $5 is to be paid at the time of service, and the remaining 10 if the mare proves in foal. Pasturing will be provided for mares from a distance, and the necessary attention given them. Accidents and escapes at the risk of the owners. A cut of this horse may be seen in the Sept. No., 1846, of the Cultivator.

FREDERICK A. WIER.

Walpole, N. H., March 9, 1847.—3t.*

ALBANY SEED STORE.
FRESH GARDEN SEEDS,

THE growth of 1846. The subscriber begs to inform his friends and customers that he is now daily receiving his fresh Garden and Flower Seeds, and has now in store a general assortment, from the most reliable sources, both foreign and domestic. Among the more important, and for the first sowings in hot beds, he would name—Early York, Sugarloaf, and Battersea cabbage; Early Ox Hart, a French variety of unequalled quality, for both heading and delicacy of flavor; it comes in use immediately after the York, and is of equal delicacy; fine Early Cauliflower; Cape Broccoli; Early Prince Albert Peas; Cedo Nulli; Blue Imperial, and other renowned Garden Peas; Early Scarlet Short Top Radish; best Early Lettuces; Purple Egg Plant; Apple or Rareripe Tomato, &c.

From his long experience in the business of a Seedsman, and unequalled correspondence, both at home and abroad, he hopes to merit an increased continuance of patronage. His assortment of Field Turneps, Carrots, and beets, is not to be surpassed. And in the Flower Garden department, every variety to be found in London and Paris is regularly sent out:—the finest German Asters and and Balsams, with too numerous a list of new Annuals to put in an advertisement. Gladiolus Floribunda Roots, Tiger Flowers, Double Dahlias, and many other desirable spring bulbs. Canary birds, of the finest song. Fancy Cages in great variety; fresh Canary, and other bird seeds; Glass Fountains, &c., &c. ☞ Traders supplied.

WM. THORBURN,

April 1—2t. Corner Broadway and Maiden Lane.

☞ Also a large and fine assortment of Fruit Trees and Roses. Catalogues gratis.

ANCIENT AND REAL LINNÆAN BOTANIC GARDEN AND NURSERY,

Late of William Prince, deceased, Flushing, L. I., near New-York.

THE new proprietors of this celebrated Nursery, known as PRINCE'S, and exclusively designated by the above title for nearly fifty years, offer for sale every description, including the rarest and choicest varieties, of

FRUIT AND ORNAMENTAL TREES,

Shrubs, Vines, Plants, Roses, &c., the *genuineness* of which may be depended upon; and they will unremittingly endeavor to merit the confidence and patronage of the public, by integrity and liberality in dealing and moderation in charges.

Descriptive Catalogues *gratis*, on application, *post-paid*.

WINTER & CO., Proprietors.

April 1, 1847—1t*

THE HORTICULTURIST,

AND

JOURNAL OF RURAL ART AND RURAL TASTE,

EDITED BY A. J. DOWNING, ESQ.

No. IX, FOR MARCH,

CONTAINS:

I. Hints on Planting Trees in Towns and Villages—II. American Vineyards—III. Notes on Propagating Trees and Shrubs by Cuttings of the Roots—IV. The Bizarre Orange—V. Notes on the Market Gardening of New-Jersey—VI. Apples in Vermont—VII. Cultivation of Roses—VIII. On Transplanting Large Trees—IX. Quince Stocks for Pears—X. Design for a Cottage Villa—XI. The Twenty Best Pears—XII. The Heathcot Pear and Cherry Plum—XIII. Description of some new or rare Hardy Shrubs—XIV. Hints on Pruning Apple Orchards—XV. Review of Colman's European Agricultural Tour—XVI. *Foreign Notices:* Smee on the Potato Plant; Winter Gardens of Berlin; Japanese Taste in Arboriculture; Gardens of Turkey; Descriptions of new Plants, &c. &c.—XVII. *Domestic Notices:* Horticultural Notes; Letter from Mr. Longworth; Superb Collection of Camellias; Treatment of Orange Trees in Pots; History of the Tyson Pear; Culture of Grapes at the South; The Locust; Culture of Oxalis Bowii; Climbing Roses; Parlor Plants in Winter; Treatment of Carnations; Retrospective Criticism; The Arbor Vitæ; Grapes in Vineries; The American Holly; Scarce Plants—XVIII. Massachusetts Horticultural Society.

ENGRAVINGS—Design for a Cottage Villa; Frontispiece—The Bizarre Orange—The Cherry Plum—The Heathcot Pear—Deutzia scabra—The Double Crimson Currant—Spiræa douglasii—The Two winged Silver Bell.

NOTICES OF THE PRESS.

The Editor of this attractive journal has earned a wide renown by his elegant and most useful works on Landscape Gardening, Cottage Architecture, and Pomology. As an original and accomplished author in these attractive and popular pursuits, he has no rival since the death of the indefatigable Loudon; and his merits have been acknowledged by marks of high consideration from some of the crowned heads of the Old World.—*Silliman's Journal.*

This magazine is printed and illustrated in beautiful style, at Albany. As to its character in other respects, it is sufficient to say that it is conducted by A. J. DOWNING, the most distinguished writer in the Union on all topics connected with horticulture.—*Cincinnati Gazette.*

We strongly recommend this excellent and useful work to all who are attached to rural pursuits, either for amusement or for profit.—*Montreal Gazette.*

Every one at all ambitious of keeping up with the improvements of the day, in gardening, should subscribe for this Journal.—*New-Orleans Com. Times.*

We have found much pleasure in assuring ourselves of just what we anticipated of the work in such hands, a *desideratum* for the *advancing* taste of the country in horticulture and rural architecture, to which the work is chiefly to be devoted. No person, perhaps, combines more harmoniously the scientific and the practical than the originator of this work.—*New-York Evangelist.*

The Publisher respectfully gives notice THE HORTICULTURIST, devoted to the cause of useful and elegant rural improvement, is now thoroughly established by a large circulation. The articles that have already appeared from the able pen of the Editor on fine new Fruits, Plants, and Horticulture generally, as well as on Cottage Architecture, Ornamental Gardening, etc., have given the work a very high character. The list of contributors includes the first horticulturists and practical cultivators in the country. The "Foreign Notices" present a monthly summary from all the leading gardening journals of Europe; and the numerous beautiful illustrations—designs for cottages, green-houses, etc., figures of new fruits, shrubs and plants, render this one of the cheapest and most invaluable works to country gentlemen, amateurs, or practical cultivators, published on either side of the Atlantic.

Price $3 a year, in advance. The back numbers furnished to new subscribers. Letters enclosing the subscription, to be addressed to

LUTHER TUCKER,
Publisher Hort. Albany, N. Y.

PEACH AND OTHER FRUIT TREES.

50,000 PEACH TREES, of vigorous growth, 6 to 8 feet in height, comprising twenty of the best leading varieties for market, will be supplied at $10 per 100, for cash, remitted with the order. The matting, &c., will be $2 per 100.

Pear Trees, of all the leading varieties, 8 to 9 feet high, with heads, at $18 per dozen, and others, averaging 5 feet, at $50 per 100. Pears untrimmed, for Quenouilles or dwarfs, 2 years grown, $9 per dozen; and 3 years, in a bearing state, $12 per dozen; 3000 Newtown Pippin; Spitzenberg and Baldwin apples, and 10,000 of other leading varieties, 6 to 7½ feet, at $30 per 100, and others at $25 per 100. 10,000 Orange and Anger's quinces, the finest varieties known, from 3 to 5½ feet in height, at $20 to $30 per 100. A great stock of Plums, Cherries, Apricots, Nectarines, Grapes, Gooseberries, Raspberries, Currants, Strawberries, &c., at low rates, by the quantity.

30,000 Isabella, Catawba, and other American Grapes, for Vineyards and Market Fruit, and 5000 Foreign Grape Vines, for Grape Houses, &c., all at lower rates than ever before offered.

☞ The accuracy of every article is expressly guaranteed; and we refer to every distinguished amateur for the precision with which all orders are executed by us. WM. R. PRINCE & Co.

Prince's Nurseries, Flushing, April, 1847.—1t.

JOSEPH BRECK & Co.,

NEW-ENGLAND AGRICULTURAL WAREHOUSE AND SEED STORE.

Nos. 51 and 52 North Market-Street, Boston.

OFFER for sale one of the most extensive collections of VEGETABLE, AGRICULTURAL, and FLOWER SEEDS, to be found in the country, comprising a large assortment that are new and rare.

Also, every description of HORTICULTURAL and AGRICULTURAL IMPLEMENTS, and TOOLS, together with a general assortment of Agricultural and Horticultural Books.

Superb varieties of FLOWER SEEDS.—We have now a full supply of fresh flower seeds from the most celebrated Florists in Europe, from our own garden in Brighton, and from other sources, of the most select varieties ever offered in this country. Special attention has been given by the subscribers in long practice, in improving the numerous varieties of hardy flowers, which have so long been the object of their cultivation, and they feel assured that the seeds saved by themselves cannot be surpassed by any other growers in the country.

GARDEN SEEDS.

Early Peas—Cedeo Nulli, Early Warwick, Early Smiths, Early Hill, Early Frame, Bishop's Dwarf, Blue Imperial, Knight's Marrow, Marrowfats, of different sorts, 25 cents per quart. Prince Albert, 37½ cents per quart; Royal Green Marrow, very superior, and Queen of the Dwarfs, a very superior Marrowfat, not exceeding 1½ foot in height, new and very excellent, each 50 cts. per qt.

Cauliflower—Large Asiatic, and other early and late varieties.

Broccoli—Chappel's Cream, New Hardy Cape, Purple Cape, Cheltenham, Brimstone, Early White, Purple &c.

Cabbages—Warner's Incomparable, (very early) Queen, do.; Wellington, Imperial, Early Hope, Early York, and other fine sorts.

Courge Tronchuecea, or Portugal Cabbage—a delicate vegetable of the Cabbage family, considered by some equal to the Cauliflower; 12½ cents per package.

German Greens—A handsome growing plant, and very desirable for "greens;" 12 cts. per package; Weeden's fine Long Frame Prize, one of the longest varieties—25 cts.; White Spine, 12½ cents; Early Synotts' Early Frame, &c.

Celery.—Bailey's Red Solid, Bailey's White do.; Seymour's White Solid, and other varieties.

Egg Plant.—Purple and White.

Endive—New Transparent Yellow, 12½ cts. Tomatoes.

Thyme, Sage, Sweet Majoram.

Melons—Nettled Cantaloupe, Black Rock, Minorca, Skillman's Fine Rock, Persian, Nutmeg, Green Citron, &c.

Also every other variety of Garden Vegetable Seed.

AGRICULTURAL SEEDS.

A general assortment of Carrot, Ruta Baga, Beets, Mangel Wurtzel, Turnep, Parsnep and other seeds for the field. Also

GRASS SEEDS.

Northern and Southern Clover, White Dutch do.; Lucerne, Herds Grass, Northern and Southern Red Top; Oat Grass, Orchard Grass, Perennial Rye Grass—wholesale and retail.

Potato Seeds, at 50c cents per package—sufficient for 2000 plants.

Fruit Trees, and Ornamental Shrubs and Plants, of every description—furnished at the lowest rates, and of the choicest varieties, at short notice. April 1, 1847—1t.

THE GENUINE MORGAN HORSE GENERAL GIFFORD.

THE horse purchased by the subscribers at the late State Fair, at Auburn, where he was exhibited, together with his sire, the Gifford Morgan," and attracted universal admiration, [see report of Committee on Foreign Stock, in Cultivator, vol. 3, page 342.] will stand the ensuing season for mares, on Mondays, Tuesdays, and Wednesdays, at the stable of Geo. A. Mason, two miles northeast of Jordan. Thurdays Fridays, and Saturdays, at Camillus.

TERMS—$10 the season. Insurance to be agreed upon. Pasturage for mares furnished by either of the subscribers at a reasonable price.

GEO. A. MASON,
D. A. MUNRO.

March 15, 1847—2t.

FRUIT TREES FOR SALE.

THE subscriber respectfully informs the public that he still continues the Nursery business, about one mile north of the Steamboat Landing, in the Village of Newburgh, and directly opposite (East) of the Powellton House.

All orders (post-paid) punctually attended to.

March 1—2t CHAS. DOWNING.

COMMERCIAL GARDEN AND NURSERY, OF PARSONS & Co.

Flushing, near New-York.

THE proprietors of this establishment are constantly increasing their stock, which now covers nearly seventy acres of ground, and includes every desirable variety of Fruit and Ornamental Trees, Shrubs, Roses, Vines, &c. Their possession o specimen grounds for the testing of every variety of fruit they cultivate, affords them increased facilities for the attainment of correctness. They would also call attention to their large assortment of Foreign Grapes, some seventy varieties of which they are fruiting under glass.

To venders, and those who purchase in large quantities, liberal discounts will be made. Catalogues can be obtained gratis of PARSONS & LAWRENCE, 10 Pine st.; of A. B. ALLEN, 187 Water st., New-York, or of the proprietors by mail.

March 1, 1847—2t.

CHOICE VARIETIES OF FRUIT.

BY S. MOULSON,

At the Old Rochester Nursery.

TWENTY thousand trees of the celebrated Northern Spy apple, all of which are root grafted. Those seven to eight feet high, fifty cents each; medium sizes, thirty-seven and a half cents; small ones at less. A discount will be allowed to purchasers of large quantities, for the purpose of selling again. This highly desirable and long-keeping fruit, having been introduced by this establishment at an early period, the proprietor is enabled to offer larger trees upon their own stocks than are usually found; and having been grown from scions of the original bearing trees in this vicinity, parties ordering may be sure of their genuineness.

Also, a general assortment of Apple, Pear, Quince Plum, Cherry, Peach, Apricot, Nectarine, Currant, Gooseberry, Raspberry, Strawbery, and Ornamental Trees and Shrubs, which will be properly packed, when desired, for any portion of the United States, Canada, or Europe. Catalogues gratis to post-paid applicants. Orders not accompanied with remittance, must contain reference, which may be to parties residing at Rochester, Boston, New York, or Philadelphia. Also at Montreal, Kingston, Cobourg, Toronto, or Hamilton. S. MOULSON,

March 1—2t. Office 36 Front-st., Rochester, N. Y.

SEED POTATOS FOR SALE.

A FEW hundred bushels of Hall's Early June Potatoes. This variety after a cultivation of four years, has proved, when planted early, unaffected by the potato disease. It is the best early potato raised for market, grows large, produces a fine crop, and is an excellent potato for fall and winter use. Several persons who applied last year through Comstock & Co., and were not supplied, have the preference this year by an early application. Orders may be addressed to the subscriber, or left at the Agricultural Warehouse of Luther Tucker.

March 1—2t. WILLIAM HALL.

PLOWS! PLOWS!!

THE attention of Farmers and Dealers is particularly invited to our assortment of Farming Tools—among which may be found a complete assortment of the most approved as well as common plows, including all sizes of the Center Draft, Side-Hill, Subsoil, Self-Sharpening Plows, from Messrs Prouty & Mears, of Boston. Also, the Eagle, Subsoil, Side-Hill, Self-Sharpening, and others, from Messrs. Ruggles, Nourse & Mason, of Worcester, Mass. Also, the Peekskill Plow, all sizes, from Minor & Horton, of Peekskill, N. Y., and Delano's Diamond Plow—all for sale at the manufacturers' home prices, and warranted. The adjustable Steel Point Self-Sharpening Plows, from the factory of Messrs. Ruggles, Nourse & Mason, is just received. This is a new improvement in the wearing parts of the plow, and has several advantages over the common plows in use. (See R. & N.'s advertisement.) Also on hand Cultivators, Harrows, Seed-Sowers, and Planters, Ox-Shovels or Scrapers, Field Rollers, &c., &c., &c., at the Albany Agricultural Warehouse and Seed Store, Nos. 10 and 12 Green-st., Albany, N. Y. L. TUCKER.

FOR SALE.

A FARM of 325 acres, in Fishkill, Dutchess Co. It is partly high limestone land, with some rich alluvial meadows along the Mattewan Creek. The buildings are new and extensive—the fences all good, and the soil in fine condition. Increased production can be obtained from inexhaustible supplies of muck and limestone on the farm. The Hudson river is six miles distant, besides which the villages, mills, and factories, near, furnish abundant market. In productiveness and position, it is one of the choice locations in the country. The beauty of this part of the country, and the variety of its scenery, make it a desirable residence. Address, post-paid, WM. VAN WYCK, Jr.,

March 1—2t.* Fishkill, Dutchess Co N. Y.

BOX FOR EDGINGS.

ONE Thousand yards Box Edgings, for sale at a low rate. Apply at the Agricultural Warehouse, No 10 Green-st., Albany.

March 1—2t. LUTHER TUCKER.

ATLANTIC GARDEN AND NURSERY,

Smithtown, Long Island, near New-York.

THE subscribers offer for sale at very low prices, a large assortment of Fruit trees, including Apples, Pears, Peaches, Cherry, Quince, Nectarine, Plum, Apricot, &c., of the most approved sorts. Also, the choicest kinds of Gooseberries, Raspberries, Currants, Strawberries, &c., &c.

The assortment of Ornamental Trees, Shrubs, and Herbaceous Plants is now very extensive, including over 10,000 Evergreen Trees, and Shrubs.

The stock of Apples and Pears, containing over 35,000 trees, includes the finest sorts in cultivation.

Orders by mail, or otherwise, will recieve prompt attention, and trees will be packed in the the best manner, and forwarded to any part of the country agreeable to order.

Catalogues sent to every post-paid applicant.

Feb. 1—3t. P. DOANE & SON.

SENECA LAKE.

A BEAUTIFUL FARM for sale, lying on the east side of the Seneca Lake, Seneca Co., N. Y., about 7 miles south of Geneva, containing about 159 acres of the best quality of land There is about 50 acres of excellent wood and timber land, and the arable and meadow land is of the best quality and in good condition. Lowest price $50 per acre. The one-half of the purchase money may remain on bond and mortgage for many years. Title good. The farm may be viewed at any time. Apply to RICHARD DEY, on the premises, or to JAMES R. DEY, No. 51 Liberty-st., New-York, or to JACOB C. DEY, Fulton-st., Brooklyn.

Fayette, March 1, 1847—3t.

FINE PURE BRED SHEEP FOR SALE.

THE subscriber being about to give up the farming business, offers for sale his stock of Merino Sheep, consisting of 54 pure bred Merino ewes—all with lamb by the celebrated Rambouillet Buck "Grandee," owned by Rev. L. G. Bingham, of Williston, Vt. Also 50 lambs from the above-mentioned ewes, got by the Rambouillet buck "Chancellor," and the Paular "Mt. Defiance," now owned by Merrill Bingham, Esq., of Cornwall, Vt. It is believed by their owner that they are fully equal to any flock of sheep in the country for raising stock. The ewes, aside from raising a lamb each, sheared last June, upon an average, 4 lbs. 4 oz. of well washed wool—perfectly clear from gum. The wool was sent to Samuel Lawrence, Esq., of Lowell, and pronounced by him to be the right kind of wool for our farmers to raise—being the most profitable.

Satisfactory evidence of the blood can be given. Apply to the subscriber at Williston, Vt., or A. B. Allen, 187 Water-st N. Y.

THOS. H. CANFIELD.

March 1—2t.

QUINCY HALL AGRICULTURAL WAREHOUSE AND SEED STORE, BOSTON.

(Over Quincy Market, South Market-St.

RUGGLES, NOURSE & MASON, wholesale and retail dealers in Agricultural and Horticultural Implements, Machinery, and Seeds.

Also manufacturers of the celebrated WORCESTER EAGLE, SELF-SHARPENING, HILL-SIDE, and SUBSOIL PLOWS, and other implements, at Worcester, Mass. As their stock of implements are mostly made either by themselves at their extensive works at Worcester, or by other manufacturers especially for their trade, their assortment far exceeding in variety and quantity any establishment of the kind in this country, and being *sole agents* for the makers of several important implements of much notoriety and usefulness, they are enabled to offer very great advantages and facilities to Planters, Farmers, and Dealers.

To their before extensive assortment of Plows, they have recently added several patterns, embracing new and *important improvements* in form, construction, and fixtures, which adapt them to both shoal and extra deep plowing. Their particular form to take up the furrow slice, and turn it over in the most perfect manner, with the least *power of draft*, leaving the soil in the best possible condition for after cultivation, and production of crops, the acknowledged and unexampled strength and durability of their castings and fixtures, the uniform construction and superior finish of the wood by machinery used only by themselves, are among the peculiar characteristics of their plows.

By the combination of the *Dial Clevis*, recently patented by themselves, and the draft rod, the plow is easily arranged to make *extra deep* or *shoal work*, at the option of the operator.

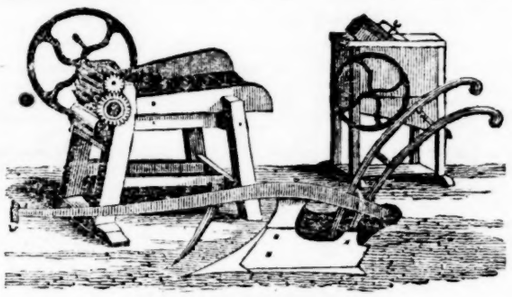
FIELD, GRASS, GARDEN, FLOWER, and HERB SEEDS, which are raised by the most experienced American and European Growers, particularly for their trade, and can be relied on as genuine and fresh, and will be packed to order, at wholesale and retail, with labels of instruction relative to the time of planting and mode of culture.

Agents for the principal nurseries in the vicinity of Boston and New-York. Guano, Poudrette, Bone Dust, &c.

Catalogues containing descriptions and cuts of their extensive stock of implements and machines; also, catalogue of Garden and Field Seeds, and Grains, embracing directions for their cultivation with general observations, remarks on soils, and fertilizers, their properties and application; and upon the propagation of Fruit and Ornamental trees: the whole comprising nearly 100 octavo pages, may be had gratis on application by mail or otherwise.

Luther Tucker, sole agent at Albany, Nos. 10 and 12 Green-St., and A. B. Allen, for New-York City, No. 187 Water-St.

March 1—2t.



JOHN MAYHER & CO.

U. STATES AGRICULTURAL WAREHOUSE,

No. 195 Front-street, (near Fulton,) New-York.

Foundry and Machine Shop 502 and 504 Water-st.

THE subscribers respectfully invite the attention of Merchants and Dealers in AGRICULTURAL IMPLEMENTS to the superior assortment of goods which they manufacture, embracing Plows and Castings of the most approved kinds in use, and possessing all the latest improvements in style, workmanship, and material, among which are the following articles, that can be seen at their warehouse:

Pitts' Corn and Cob Crusher. Price, $40
Sinclair's do.—hand or horse, $30
Fitzgerald's Patent Burr Stone Corn Mill, $60
Sinclair's Cast Plate Corn Mill, $40
Swift's Corn, Coffee, and Drug Mill, $6 to $8
Hovey's far-famed Hay, Straw, and Stalk Cutter;
Sinclair's Hay, Straw, and Stalk Cutter;
Greene's do. do. do.
Mayher & Co.'s do. do.
Langdon's do. do. do.
I. T. Grant & Co.'s Premium Fanning Mill;
J. Mayher & Co.'s do. do.
Boston Centre Draught Premium Plows,
Bergen's Self-Sharpening Plows;
Dutcher's Plows of all kinds;
Hitchcock's do. do.
Freeborn's do. do.
Minor & Horton's Plows, all k'ds;
Worcester Eagle do.
Mayher & Co.'s Eagle improved Plows;
Mayher & Co.'s much approved Plows;
Langdon's Horse Hoe Plows;
Castings to fit all kinds of Plows in use;
Mayher & Co.'s 2 Horse Power, Price, $55
do. do. 4 do. $75
do. do. 2 Thresher, $25
do. do. 4 do. $30
John Mayher & Co.'s First Premium Corn Sheller;
Burrall's Corn Sheller;
Warren's do. do.
Sinclair's Corn Sheller and Husker;
Pitt's Horse Power and Threshing Machine;
E. Whitman's Jr., Thresher and Separator;
Subsoil Plows of different kinds.

Cultivators, Wheelbarrows, Canal Barrows, Store Trucks, Horse and Ox Carts, Mule Wagons, Ox-Yokes and Bows, Hames, Trace and Ox Chains, Road Scrapers, Ground Augurs, Shovels, Spades, Pick Axes, Hay and Manure Forks, Rakes, Hoes, Scythes, Scythe Snathes, Grain Cradles, Crow Bars, &c., &c., all of which will be sold as cheap as they can be bought at any other store in the city, and are warranted.

Gin Gear, Segments, Rag Wheels, &c.

Castings of all kinds made to order. March 1, 1847—tf.

TO NEW-YORK FARMERS AND EMIGRANTS.

ONE hundred and fifteen thousand acres Illinois Lands for sale, in tracts of 40, 80, 120, 160 acres, or more, to suit purchasers. The lands are all first rate, and among the very best in the state, and are situated in the counties most densely settled, viz., Morgan, Scott, Cass, Mason, Menard, Green, Sangamon, Logan, Christian, Mason, McLean, Woodford, and Macoupin. To actual settlers every reasonable indulgence will be given as to time of payment. The price from $3 to $5 per acre.

A correspondent of one of the New-York papers, writes respecting this section of Illinois as follows:

"*Beardstown, Cass Co., Ill., Jan. 10, 1846.*

THE RICHES OF THE WEST.—GOTHAMITES ON THE WING.—It is now six weeks since I left the city of Gotham, during which time I have seen considerable of this western country, and I must say the beautiful prairies of Illinois, far exceed what I had anticipated, and this country may truly be called the garden of the world. There is nothing to prevent farmers in this country from getting rich, as the land is the most fertile in the world, and it will produce everything grown in the vegetable kingdom.

"A New England man would hardly believe me if I tell him that some farmers here produce ten thousand bushels of corn, and half as many bushels of wheat in a year, to say nothing of cattle and hogs, of which some raise as many as five hundred head. One farmer told me that he raised the last year 6000 bushels of corn, and it was all produced by the labor of two men only.

"Cattle and sheep feed upon the prairies all winter, as they are seldom covered with snow."

Most of the above lands may be cultivated 100 years or more without manuring, being of the richest alluvial soil. The titles are indisputable, and the lands will be sold at low prices and in quantities to suit purchasers. Letters (post paid) addressed to D. B. AYRES, Esq., of Jacksonville, Ill., or the subscriber, will receive prompt attention. As many persons out of the state have an idea that the taxes are very burdensome in Illinois, we state that they range from $1.50 to $2.00 per annum, on 80 acres of land.

JOHN GRIGG,

Jan. 1, 1847.—6t No. 9 North Fourth-st., Philadelphia.

WIRE CLOTH SIEVE AND SCREEN MANUFACTORY.

THE subscriber has constantly on hand a large assortment of the above articles, which he offers at the lowest market prices. D. L. CLAWSON.

July, 1846—10 mos. 191 Water-st., New-York.

P. S.—All kinds of wire work manufactured to order.

HIGHLAND NURSERIES.

NOTICE.—A. J. DOWNING having retired from the Nursery business heretofore conducted at Newburgh under the firm of *A. J. Downing & Co.*, the same will be continued by the subscribers. They will not only endeavor to maintain the high character which these Nurseries have had, for a long time, but, as the present stock is gradually drawn from Mr D.'s grounds, they will greatly enlarge the Nurseries, and endeavor fully to meet the constantly increasing demand for the trees grown here.

Orders addressed to the subscribers *post-paid* will receive prompt attention, and all trees, shrubs, plants, &c., will be carefully packed and shipped to any part of the Union. A. SAUL & CO.

Highland Nurseries, Newburgh, Feb. 15, 1847.

The undersigned strongly recommends the above Nursery firm to public confidence.

The practical management of the Nurseries will be in the hands of Mr. A. SAUL, who has been at the head of this department here for the last eight years, and his accuracy and fidelity in the propagation of fruits and general care of the Nurseries, during that time, are the best guarantee for the faithful and careful manner in which the business will hereafter be conducted.

A. J. DOWNING.

Highland Garden, Newburgh, Feb. 15, 1847. Mar-1t

ALBANY SEED STORE,

No. 10 Green-Street.

THE subscriber has now on hand at the above establishment, a general assortment of FIELD, GARDEN, and FLOWER SEEDS, warranted of the best quality, and which will be sold at as low rates as at any place in the country. Among the assortment, are the following:

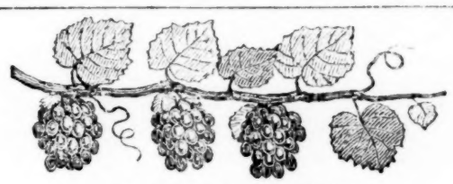
GRASS SEEDS.—Timothy, Orchard, Red Top, Western, and Northern Clover, &c., &c.

SPRING GRAINS.—Black Sea Wheat, Rye, Barley, Buckwheat, Millet, Peas, Indian Corn, &c., &c.

ROOTS.—Hall's Early, Carter, and other kinds of Potatoes—Altringham, Long Orange, and Large White Carrots—Ruta-Baga, Mangold Wurtzel, Sugar Beets, &c., &c.

GARDEN AND FLOWER SEEDS of all kinds.

March 1. LUTHER TUCKER.



ISABELLA GRAPES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far north.) All communications, post-paid, addressed to R. T. UNDERHILL, M. D. 326 Broadway, New-York, will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his vineyards, and nurseries, by improved cultivation, pruning, &c, that they will generally ripen well, and produce good fruit when planted in most of the northern, and all the western, middle and southern states.

New-York, March 1—2t.

HORSE POWERS AND THRESHERS.

THE attention of farmers is invited to Wheeler's Patent Horse Powers, an engraving and description of which is given in the Cultivator for Feb., 1847. Among the advantages of this power are its compact size and lightness, and the ease with which sufficient speed can be obtained for threshing, without gearing, and consequently greatly lessening the friction. It will be found a great labor-saving machine, as it may be attached to Threshing Machines, Circular Saws for sawing, Straw-Cutters, or any other machine which it is wished to impel by motive power. Price, for single horse power, $75—for two horses $95.

Also, Wheeler's Spike Thresher, with a cylinder of 14 inches in diameter, and 22 inches long, with the concave filled with spikes on the upper side, thus avoiding accidents by preventing stones or other substances getting into the Thresher. Another advantage of this Thresher is, that it scatters the grain much less than many others. Price $28—with Separator attached, $35. The Separator divides the straw and grain, by a shaking motion which it receives from a crank attached to the Thresher, thus saving the work of one or two men with rakes.

With this Horse Power and Thresher, 200 bushels of oats, or 100 of wheat may be threshed per day, with a change of horses.

The above machines constantly on hand at the Albany Ag. Warehouse and Seed Store, No. 10, Green-street.

Albany, Jan. 12, 1846. LUTHER TUCKER.

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BUCKTHORN HEDGES.

FIVE THOUSAND Buckthorn Plants, one year old; also Buckthorn Seed, for sale at the Albany Ag. Warehouse.
Albany, April 1 LUTHER TUCKER.

INOCULATED PEACH TREES.

AN assortment of the best varieties, and a few trees not inoculated, raised from stones brought from South America.
ASPARAGUS ROOTS, of two and three years thrifty growth. For sale by ISAAC ROOSEVELT.
March 1, 1847—1t* Pelham, New Rochelle P. O., N. Y.

GUANO.

200 TONS Ichaboe Guano, balance ship Shakspeare's cargo, the best ever imported in the country, for sale in lots to suit purchasers, by E. K. COLLINS, 56 South-st.
April 1.—tf.

AG. WAREHOUSE AND SEED STORE,

Nos. 10 and 12 Green-st., Albany.

FOR sale, at all times, at the above establishment, all kinds of Agricultural and Horticultural Tools, Implements, and Machines, from the best manufacturers, and at as low prices as at any establishment in the country.

Plows of all kinds and sizes;
Harrows and Cultivators, of different kinds;
Manure Forks, Shovels, Spades, Hoes;
Horse Powers and Threshing Machines;
Corn Shellers, Straw Cutters, Corn and Cob Mills;
Drill Barrows and Corn Planters;
Fitzgerald's Portable Burr Stone Mills;
Harvesting and Haying Tools of all kinks;
Ox Yokes and Bows, Draft, Tie-up, and other chains;
Grant's and other Fanning Mills.

Garden Rollers, Ladies' Weeding Trowels, Grass Shears, French pattern, Border Shears, Garden Reels and Lines, Budding and Pruning Knives, Garden Rakes, Hay Knives, Transplanting Trowels, Pruning Saws, various kinds, Bark Mills, Sugar Mills, Bush and Bill Hooks, Root or Vegetable Cutters, Bull Rings, Axes and Hatchets, Patent Axe Handles, Wheelbarrows, Anti-Friction Rollers, Ship Scrapers, Spinning Wheels, Reels, Smith's Corn Sheller, Burrall's Corn Sheller, &c.

Churns, Cheese Presses, Tubs, and Pails, &c., &c.

Together with a general assortment of Field, Garden, and Flower Seeds, Seed Corn, Choice Potatoes, &c., &c.
April 1. LUTHER TUCKER.

POUDDRETTE.

THE Lodi Manufacturing Company offer their Poudrette for sale the following season at *reduced* prices, viz: In barrels delivered free of cartage, at any wharf or place in the city of New-York, at the rate of $1.50 per barrel, for any quantity over 7 bbls.; under 7 bbls., $1.75.) In *bulk*, at the factory, on the Hackensack river, where vessels drawing 8 feet of water can come, it will be delivered at the rate of 25 cents per bushel. Planting 4 feet apart, each way, 2 barrels or 8 bushels of Poudrette will effectually manure an acre of corn, and will vie in cheapness and efficiency with any manure now in use.

Apply by letter *post-paid*, to the "LODI MANUFACTURING CO.," New-York, or to James B. Cox, Agent, No. 90 West-st.
April 1—3t.

NEW-YORK AGRICULTURAL WAREHOUSE.

FARMERS, Planters, and Gardeners, will find the LARGEST and MOST COMPLETE assortment of Agricultural Implements, Field and Garden seeds, of all kinds, ever offered in this market. Most of the implements are of new and highly improved patterns, warranted to be made of the best materials, put together in the strongest manner, of a superior finish, and offered at the lowest cash prices. A. B. ALLEN & Co., 187 Water-st., N. Y.
March 1—3t.

CHEAP PLOWS.

SINGLE-Horse Plows, from $2.00 to $3 00 each;
Double-Horse " " $3.00 to $6.00 "

The woods of these plows are made of the best of *white oak*. The handles are *steamed* and then *bent crooked*, instead of being sawed out. This makes them much stronger and more durable. The castings are made from good *new pig iron*, without any admixture of *old scrap*. The wrought iron work is of excellent quality, with *extras* attached to the plows. A liberal discount to dealers.
A. B. ALLEN & Co., 187 Water-street, N. Y
March 1—3t.

FIELD AND GARDEN SEEDS.

A LARGE and complete assortment of Field and Garden Seeds of all kinds, constantly on hand, for sale by
A. B. ALLEN & Co., 187 Water-Street, New-York.
March 1—3t.

STOCK FOR SALE.

MATCH and single Horses, some of which can trot their mile under three minutes, others rack and gallop easily, making admirable saddle-horses for ladies and gentlemen; Durham, Devon, Hereford, and Ayrshire Cattle; Merino, Saxon, South-Down, and Leicester Sheep: the large white English breed of Swine, Berkshires, Poultry, &c., &c. Apply to
A. B. ALLEN, 187 Water-Street, New-York.
March 1, 1847—tf.

AMERICAN AGRICULTURE,

BY R. L. ALLEN.

THE cheapest and most valuable Book for a Farmer ever printed. Being a complete guide, both Practical and Scientific, for the management of the Farm.

The reader can form some idea of what he is going to buy, from the fact that this work treats in a plain, practical manner, of upward of EIGHT HUNDRED different subjects, important to the Farmer, the Planter, the Stock-Breeder, and the Horticulturist. It also touches on Chemistry, Geology, Botany, Anatomy, Physiology, and Mechanics, as applicable to Agriculture.

The book contains 437 pages, and is beautifully bound in cloth gilt, suitable for a library. It would be a most valuable Premium for distribution among Agricultural Societies, to which, and the Trade, a liberal discount would be made. Price, One Dollar. For sale by A. B. ALLEN, 187 Water-St., and by C. M. SAXTON, 205 Broadway, } New-York.
March 1—2t.

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